

# CALIFORNIA AND WESTERN MEDICINE

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# CALIFORNIA AND WESTERN MEDICINE

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## TUBERCULOSIS

By JOSEPH W. COOK \*

The vast majority of patients suffering with tuberculosis, as well as infirmities, are still cared for by the general practitioner. Not enough of our vast literature on the subject is readily adaptable to the conditions such doctors must meet.

Here is an inspiring, thought-provoking essay by "a general practitioner and country doctor," himself a one-time sufferer from the white plague, which contains valuable messages to doctors and patients. The story is told in a delightful narrative style that enhances the value of any contribution and toward which scientific literature is tending.

—Editor.

IT SEEMS rather presumptuous for me, a general practitioner and county doctor, to read a paper on tuberculosis. My colleague, Doctor Bramkamp, has just given a résumé of the diagnosis and treatment from the point of view of a specialist. What I have to say to you is from the point of view of a general practitioner, who is called upon to do more or less tuberculosis work. I will make an appeal to you from my own experience as a patient eight years ago, and as one who is called upon to treat patients, many of whom are disgusted with doctors, both general and special, but in desperation must consult one more.

For nine years I was particularly interested in surgery, and in Persia, during four and a half years of my residence there, operated on some 400 cataract cases in addition to stones, hernias, empyemas, bone tumors, osteomyelitis, etc.; not much abdominal surgery.

During all this time I remember seeing not more than a half-dozen patients with tuberculosis of the lungs. There is really little there, but I am sure now that I often overlooked it. This may have been my fault, but I venture to say that it was more the fault of the University of Pennsylvania, as they neglected to stress tuberculosis; and I spent endless hours in stupid laboratory work, and more endless hours in watching clever surgeons advertising their skill while countless numbers were dying with tuberculosis, and we students were to go out to practice unable to recognize it, as a rule, until the patient was about to die; or if we fell upon the diagnosis sooner, we were to suggest a change of climate, feeling that we had done our duty.

I woke up one day with tuberculosis. In November and March I had been carefully examined for the Army. I was nervous and run down and had a slight hacking cough. By May I began to have dark-colored sputum which I bluffed myself into thinking came from my nose. I began to get hoarse on all occasions after talking. One day in June I had a terrific pain over my left clavicle which lasted ten days. Meanwhile, I had had a constant sore throat, red and glistening, a large uvula which occasionally almost choked me. I had my throat examined by a specialist. My lungs were never thought of until I begged a friend to go over them, but even with an obvious pleurisy and with a temperature of 104, he found nothing. My left ear burned almost constantly. An ulcer in the anal region which bled freely also annoyed me.

Finally, in August a slight hemorrhage followed by a positive sputum examination settled the diagnosis. I was lucky and got well. The early hemorrhage saved the day. Others are not so fortunate, and the diagnosis of tuberculosis remains a most difficult problem for physicians the world over.

I plead for early diagnosis. General practitioners must learn what to look for and how to recognize the symptoms.

Lawrason Brown has splendidly summarized the five cardinal signs, present in practically every case, by recognition of which 95 per cent of cases can be definitely determined: (1) positive sputum; (2) definite hemoptysis; (3) definite pleurisy with effusion; (4) definite localized rales on cough above level of third rib at apex; (5) definite x-ray changes in same area.

The important thing, as Alexander Miller says, is to remember that tuberculosis has existed a long time without manifestations which have been recognized. It is a chronic illness, not by any means continuous. It is a relapsing infection, with slight manifestations followed by short or long periods of quiescence, and

\* Joseph W. Cook (Banning, California). M. D. University of Pennsylvania, 1910; B. A. Princeton University, 1904. Graduate study: eighteen months in University Hospital, Philadelphia. General practice. Previous honors and services: Captain U. S. M. C. during late war; medical missionary in Persia 1912-17 in charge American Hospital, Teheran, Persia.

more important than physical signs are slight malaise, slight fatigability, slight loss of weight, slight digestive disturbance, slight irritability with or without afternoon temperature, and rapid pulse.

Do not be misled by the large size or good general appearance of a patient; some of the sickest patients are big, fine-looking men, but on examination their chests are found to be filled with rales.

Active tuberculosis, according to Bushnell, is due to failure in immunization in a minority of the infected, but this failure to resist may be and often is slight and temporary, so that even relatively trivial remedial measures are sufficient to enable the patient's resistance to reassert itself and to triumph over the disease.

One object of treatment, then, is to help the patient to cure himself. We are helping the patient, not attacking directly the tubercle bacillus, and therefore we must individualize in our treatment. There is no routine treatment applicable to all patients alike in pulmonary tuberculosis.

John King, after forty years' experience, both subjectively and objectively, came to the conclusion that tuberculosis is not the result of infection alone, but the result of infection plus something else. That instead of fighting the bacillus tubercular we had better learn how to live with tuberculosis and wage war against the something else. The something else may be an economic or social condition, worry, anxiety, fears, fancies, overwork, or just damn foolishness. One of my patients said to me one day that he had come to the conclusion that all tubercular patients were damn fools. Being one myself, I knew it only too well, so agreed with him.

The treatment of tuberculosis is almost unique, in that it is the task of the physician to educate his patient to take up a new mode of life. We must help the patient to cure himself. The physician must become a teacher, a guide, and adviser both physical and spiritual.

Inasmuch as there is no definite cure for tuberculosis, it is incumbent, I feel, upon us to be fair and state frankly the conditions of cure. These conditions I believe to be four: rest, fresh air, good food, and peace of mind. You notice that I have not mentioned medicines. However, their intelligent use is not the least important phase of the whole subject. "The patient is a human being," says Fishberg, "and when we consider the human element we find that as a rule he has little confidence in a physician who has no remedy for his ailment. This is not only true of the ignorant, but also to the same extent among supposedly intelligent patients. It cannot be denied that in many respects medicaments properly administered act by psychic suggestion." I have searched for six years and all I can learn of medicines in tuberculosis is that their chief value lies in the psychic effect, be it tuberculin, iron, arsenic, or what not. Even so, when all is said and done, the psychic value is of the greatest value. The one medicine which seems to have the greatest acknowledged value, whether psychic or physical cannot be stated, is sodium cacodylate. By symptomatic treatment we can make our patients more comfortable and more happy, and so increase their chance of

recovery. But to return to the four essentials in treatment or conditions of cure, rest, fresh air, good food, and peace of mind.

The meaning of rest should be understood. Just lying in bed is not sufficient. It is physical and mental relaxation. Mental rest is just as important as is physical. Trudeau used to say, "Conquer fate by acquiescence." "Letting go" is, I believe, the secret of real rest. Teach your patient the value of total relaxation of all muscles. Let him practice lying absolutely relaxed, every muscle limp. Remember it requires 20 per cent more energy to sit up than to lie down, and 30 per cent more to stand up.

Rest in every way possible. Teach your patient to lie on his bad side. As Webb recommended, persuade him to spend twenty-three hours a day in this position. Webb said he was doing fewer pneumothorax operations by far since he had persisted in this treatment. The rationale is clear. Watch your patient breathe; the bad side lags; nature is trying to rest it by keeping this side quiet and splinting it. Help nature. Your patient won't like it at first, but after a few days he will much prefer it.

Teach your patient to stop breathing as much as possible. Knopf several years ago introduced his controlled diaphragmatic breathing. "Pretend," he says, "that your breath starts from your right big toe, goes up your right leg to the region of your liver, crosses to the left while you hold your breath, and passes down and out your left foot." A childish idea, but it works. Practice slowing your breathing to eight or ten per minute, and see how much your lung would be rested.

Stop your patient breathing with his chest and insist on diaphragmatic or stomach breathing; never breathe deeply.

Bushnell says: "When the patient breathes with the affected lung, the healthy parts expand more than the diseased parts. Hence there is great danger of the aspiration of lymph containing tubercle bacilli. Rest is used to prevent tuberculosis from spreading. The inflamed focus in the lung is a boil that does not hurt because there are no nerves in the substance of the lung. Deep breathing amounts to squeezing the boil."

The length of rest is to be determined only by the reaction of the patient. At Trudeau's all patients are routinely put to bed for six weeks after arrival. Absolute rest in bed should be continued until the temperature and pulse are normal, and other symptoms are alleviated. Personally when this situation arrives I try to persuade my patient to stay in bed a month more, and in some cases six months more. In others I let them begin to sit up gradually and then later begin to walk a little, increasing every day.

Webb says, in regard to this phase, "Rest in pulmonary tuberculosis should be prolonged many months after the temperature and pulse have become normal and sputum has disappeared. The tubercular deposits in lungs have in general started to clear after six months of rest, but have not been completely absorbed until from two to three years of rest." And Pottenger adds that "marked lesions

will disappear entirely" after continued absolute rest.

The value of fresh air and good food are so well known that they are accepted by us all as essentials in treatment. You are all undoubtedly familiar with the experiment several years ago by army doctors in which a group of men with tuberculosis were selected, all in about the same physical condition. One group was placed in a contrivance which permitted the bodies of the patients to be in fresh air and their heads in close, stuffy compartments. Another group was so placed that the conditions were reversed; their bodies were in stuffy compartments and their heads in the fresh air. Strange to say, it was shown that the men whose bodies were given fresh air did better than the ones whose heads were in the fresh air, showing that our bodies breathe as well as our lungs, and that not only our heads but our whole bodies must be given all the fresh air possible.

And this introduces the subject of fresh-air baths and sun baths. Rollier scoffs at those who say that lungs cannot be treated by the sun, but, as in peritonitis, minimal exposure to the affected part is essential at first. It may be presumptuous, but I venture to say that sunlight given under careful supervision is the most important contribution to the treatment of tuberculosis that we have. Rollier's experience has proved the almost unlimited usefulness of the sun in the treatment of extrapulmonary tubercular lesions, and everyday tuberculosis specialists are being convinced that the sun can do the same in the treatment of pulmonary tuberculosis. I cannot understand the hesitancy on the part of many physicians to give their patients the advantage of the marvelous healing and stimulating power of the sun's rays. If without the sun's rays we cannot live, I feel that with more of the sun's rays we should live well and better than ever.

As to food, there is no diet for tuberculosis. Just good home food, well balanced; no stuffing.

Peace of mind. A man said to me the other day about his wife, "Whenever she expects to get well she improves." Bushnell spoke of the value of "an autopsychotherapy in which the patient is taught to ignore unfavorable sensations and suggest to himself sensations of well-being and of strength. This comes close to the position of Coué, but with this difference: optimism is only in place when the conditions of treatment are complied with and when removable injurious influences have been done away with."

Webb recently wrote, "We must remember that a mind unoccupied is a mind distressed." The patient must be happy while resting.

A patient must be taught the meaning of mental "letting go," that the only way, as Trudeau used to say, as I quoted before, was to "conquer fate by acquiescence." Teach your patient, if you can, and I confess it is difficult because it's the rare physician who has learned it himself, to stop struggling and hurrying to get well, but to let go; acquiesce, bow to fate if you will, and work out a philosophy of life which will suit him and help him and lift him. It may not cure him, but it will take his fear away and give him something which is more worth while

even than health itself. I am getting into deep water, but I am convinced that here begins the greatest work that a physician is called upon to undertake. One must study the soul life of the tubercular patient.

Gentlemen, we all feel our lives to be charmed. No tuberculosis for us; but you may wake up some day and find you have tuberculosis. I plead for consideration in your dealing with tubercular patients. Remember, you may be the next and in the same position, having to change your work or mode of life. Put yourself in his place and, remember, it is never too late to mend.

"A true physician for tubercular patients," as Knopf said, "must be a sociologist and the highest type of psychologist, the sympathetic physician for a suffering soul, a worried mind, and a saddened heart." The great Detwiler once said to his resident Knopf in reference to a patient, rather unaccountably losing ground, "My son, see if there is anything on his mind."

Just a word as to the cure of tuberculosis. We should remember there are two types of cures to be striven for: First, the perfect physical cure; second, the economic cure, i. e., to build up your patient's physical and mental condition and give him the necessary training, bearing in mind what he can and cannot do, that he may be trusted to go out into the world and earn his living. His tuberculosis may be quiescent or latent, but it matters not, provided your patient can keep his resistance well above the danger level. I trust the time will come when we can have in America, as they have in England, communities or industries where ex-tubercular patients can be rehabilitated. It would be a great boon if only our tubercular patients could find work in accord with their working abilities—one hour, two hours or more of remunerative work per day until gradually they become able to do full-time work.

I feel there is no question in the minds of all of us that the essentials of treatment are in general as have been given her. But for a moment, may we consider the appalling fact that the majority of patients can in no proper manner afford to do what I have suggested as essential.

Many of them run out of money before they find out what is the matter with them—for frequent examinations by ourselves and by specialists, plus x-rays, stereoscopic and fluoroscopic examinations, plus again in many instances surgical operations for removal of all removable organs, as Pottenger states is not infrequent—all these cost considerable money. Even the poor man pays these costs not unwillingly, as he is anxious to find out, but having found out, he is told to rest. He may have a wife and four children, and may have been a clerk on a small salary. And now what? It is for this type of patient, of whom there are many, that we must band ourselves together, realizing that we are doctors not alone for the treatment of sick individuals from whom we obtain our livelihood, but that we are a band of men to whom the care of the physical welfare of the nation and the world is a sacred obligation.

We must find a way to help this class of patients.



Individually we do all we can in the way of advice and treatment, but the financial problem is one for the county and state to solve, and we must advise how it can be done. Is the building of a hospital capable of holding from thirty to forty of our county patients sufficient? Perhaps I am broaching a subject which is most difficult of solution. However, I raise the question in good faith.

We are in a position to know better than any other class of people the needs of the indigent or half-indigent tubercular patient, and we must help our communities solve this great problem, bearing in mind the very intimate nature of the problem, as who knows but that he may himself be a part of that problem at some time.

At this point will it be out of place to make a plea that we may be fairer with our tubercular patients? The cry those of us who are doing tuberculosis work hear on all sides is, "Oh, if only Doctor So-and-So had examined me carefully and had told me truthfully; or if he didn't know, if he had only been fair enough to send me to a man who did!" As a patient said to me the other day, "I used to go to my doctor's office and he'd open the neck of my dress, and sometimes not even that, and listen a moment and say, 'Oh, you are all right,' in spite of the fact that he had tapped my chest for fluid, and I had had a cough and fever for months. For nearly a year this continued. Finally he commenced tuberculin, and for another year I went to his office for tuberculin."

The apparent prevalence of the custom of having patients who should be taking absolute rest in bed for active tuberculosis come to a doctor's office for treatment seems to me rather startling. In some instances the very men who stress bed rest have their patients come for miles by auto or trolley, and wait in crowded waiting-rooms where the nurse at the desk may ask, "Have you shown any color?" Such patients become exhausted, and go home wondering and questioning as to the fairness and wisdom of such a course of treatment.

Is any known treatment of tuberculosis of sufficient value to offset the exhaustion attendant upon this prevalent custom? Not one, but many patients have assured me that this has been their experience. "There is little after all," as one patient expressed it to me, "that the physician can do in the way of medical treatment, but the patient needs his attendance nevertheless. The average patient has no adequate conception of what rest means, or when to begin to exercise or when to discontinue it, and he needs careful supervision of all these matters. Proper guidance may mean the difference between success and disaster," but in all justice absolute fairness must be accorded by all physicians, whether general practitioners or specialists.

I cannot close in a better way than by quoting from a paper by E. T. Shields on home treatment of tuberculosis. After stressing in general the points I have tried to bring out, he urges the practical value of a hobby as a therapeutic measure for all patients, and then adds:

"Life's values cannot be measured alone in terms of physical strength and material possessions. More

truly is its worth to be discovered in nobility of character, self-discipline, and unselfish service for fellow-men. Bodily weakness and physical handicaps are not necessarily incompatible with high moral courage, mental vigor, and able service. Human lives though shattered and broken in body may not ruthlessly be consigned to the scrap heap. Like a broken alabaster box of precious ointment, they may ever pour out unselfishly of their richness upon those around them. Many such broken and shattered lives can still be mended, and their usefulness and sweetness restored.

"In the work of salvaging human lives, no greater opportunity for unselfish service can be found than the helping and inspiring of those individuals who are making the fight against tuberculosis with its tremendous odds. Whether one is engaged in sanatorium or in private practice, it is a thrilling experience to have some of the choice spirits of mankind confess to you that the best thing that ever came to them was that they had tuberculosis, because through the hard schooling that the cure had imposed upon them they had learned some of the deeper lessons of life, and that life is exceedingly precious and desirable even though hemmed about by the limitations of physical weakness.

"To the busy practitioner who has never yet dared to treat tubercular patients at home, may these thoughts on home treatment open the door to some new and rich experience, and may he know some of the happiest moments of his life as he watches his patients become disciplined in mind, renewed in spirit, and strong in body!"

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**The Dangers of Iodized Salt**—Campaigning against goiter prevention has resulted in the adoption of various types of procedure by states and municipalities. Michigan, in 1924, adopted a law that all the salt sold in the state should contain a certain amount of iodine. Rochester, New York, for a period of time iodized the city water supply. Numerous cities have given iodine-containing pills to school children. There appeared to be a sense of satisfaction that the goiter problem was being solved in a simple and practical manner.

As is frequently the case public officials seize upon an idea and crystallize it into law before the complete value of the idea can be ascertained. C. L. Hartsock, in the *Journal of the American Medical Association*, May 1, 1926, draws attention to the fact that hyperthyroidism has apparently increased in some communities, with the cause, apparently, attributable to the use of iodized salt. His conclusions, as a result of the study of numerous cases, indicate that "the community use of iodine may produce, especially in adults, an incidence of thyroid disturbance of greater economic importance than the evil it is designed to abolish, and that the general use of iodine will never be free from danger unless it is supervised by the medical profession, with safe standards for the administration of this potent drug.—*American Medicine*."

Will the failure of this foolish fad teach our uplifters and health crusaders a lesson? It will not. We will go right along promoting laws, fixing standards, setting up "averages," and what-not for the wholesale practice of medicine.

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This is the true joy in life, the being used for a purpose recognized by yourself as a mighty one; the being thoroughly worn out before you are thrown on the scrap-heap; the being a force of nature instead of a feverish selfish little clod of ailments and grievances, complaining that the world will not devote itself to making you happy.

—Bernard Shaw.

THE POSTURAL DEVELOPMENT OF INFANTS  
WITH SPECIAL REFERENCE TO THE  
DEVELOPMENT OF THE FUNCTION  
OF WALKING AND PROPER  
SHOEING †

By CLIFFORD SWEET \*

**N**ERVOUS energy lost, because one must live and work under a handicap, is sheer waste of human values—subtracting from creative ability and diminishing the store one has to spend on the “joy of living” after work is done. True, most of us are comfortable and are therefore satisfied with ourselves, not realizing that we go about our daily tasks carrying the weight of our own bodies at a mechanical disadvantage, which, even though it be small, when multiplied by the active hours of an average lifetime is considerable and when translated into wear and tear must hasten the decline in efficiency of the body.

Those of us who examined recruits and soldiers have a vivid memory of the faulty postures and particularly of the inefficient feet we saw among healthy young adults. Casual observance, while walking the streets or when seated in a public lobby, will bring to your attention the awkward, incorrect, and inefficient gait of almost every adult who passes. The head thrust forward, shoulders drooped to form angel wings, marked lordosis with over-prominent abdomen and buttocks, feet everted and pronated make up the prominent traits of the walking posture. In this posture only one gait is possible: the body is propelled forward in short, jerky movements with a pushing action, taking off from the inner border of the foot. This can be seen more clearly as persons walk from you on the moving picture screen and can be observed in such manner as to remove all doubts of the correctness of the observation when you are five or more stories above pedestrians and looking down directly upon them. Contrast this with the natural gait with its long swinging stride, the foot grasping the ground, pointed at least straight ahead or toeing in, taking off over the ends of the toes and the body propelled forward by the powerful pull of the thigh flexors, lifted by the even more powerful calf group with a smooth elastic movement made possible by functioning and well-developed arch muscles, and you begin to have a conception of the loss sustained in efficiency and grace of movement by the average individual.

After we began, some years ago, to scan carefully every child with reference to his posture we noticed: (1) that faulty posture was rare in young infants, while very common in older children, especially in the pre-school group; (2) that with the faulty pos-

ture of the older group went almost constantly certain deformities of the feet and deflection of the weight-bearing line in its foot to leg passage.

The infant stands in such manner as to gain greatest stability, that is, with his joints locked in a position of rest. Stability is the one essential of his upright position. His first steps are taken, maintaining this, and propelling himself forward by swaying his entire body from side to side and planting his feet forward successively by a swing of the leg. As stability increases and co-ordination of nerve muscle impulses is learned, the gait changes to that described above as the natural gait, unless the natural order of development is interfered with.

The first factor interfering with development is heredity. The individual whose inheritance gives him poor general muscular equipment easily falls into faulty posture or develops inferior methods of movement, even though his environment be good. Also the child with a congenital unbalance of one or more muscle groups is handicapped unless special education is directed toward the improvement of his inherited condition; this we see very frequently, for example, in families, several of whose members have a congenitally weak calf group. Because of this weakness, walking is begun late, the infantile method of standing and walking is continued relatively late into childhood and eversion and pronation of the feet become permanent unless proper corrective measures are begun early and carried on long enough to produce permanent results.

Next nutrition plays a most important part. If at any time during the growing period rickets is allowed to develop, deformity of some degree results. Rickets always produces not bony weakness alone, but muscular weakness as well, and all growing children develop some degree of rickets, unless proper food, sun baths and cod liver oil are supplied in adequate amounts. Acute illness with its attendant drop in nutritional state and muscular vigor often forms the basis of faulty posture or gait. Muscles that are perhaps able to hold their own under favorable conditions, lose ground even during a short illness and may not be able to regain power enough to re-establish balance unless assisted. Therefore, after all acute illness, rest should be enforced long enough to permit a return to a state of nutrition that is near normal, and any observed faults should be corrected before gaining permanence.

These general considerations are discussed that we may appropriately evaluate them in considering our broader problem. However, they do not explain the prevalence of eversion and pronation of the feet in children after infancy is passed. This fault is almost universal or so nearly so that there must be some fundamental, generally prevailing cause for it.

For several years before I arrived at my present views, correction was attempted by elevating and advancing the inner border of the heels. This is a very satisfactory procedure and, if continued long enough, produces good results. During this time I questioned every one I met who might possess special knowledge on the subject without obtaining explanations that were altogether satisfactory. The explanation most often given was that the individual had an overactive and overstrong calf group. This was found to be true in the great majority of chil-

† Address as Chairman of the Section on Pediatrics, 1926 Session, California Medical Association, Oakland.

\* Clifford Sweet (242 Moss Avenue, Oakland). M. D. University of California, 1912; B. S. University of California, 1909; M. S. University of California, 1912. Graduate study: University of California Hospital, 1912; Harvard Medical School and Massachusetts General Hospital, 1913. Previous honors: M. C., U. S. A., 1918-19. Present hospital connections: Baby Hospital, Oakland, and Fabiola Hospital, Oakland. Scientific organizations: Alameda County Medical Society, California Medical Association, American Medical Association, and California Academy of Medicine. Practice limited to diseases of children since 1919.



dren, but the fact still left unanswered the question of "Why Is the Calf Group Overdeveloped and Overactive?" We now believe the answer is in the following observations:

The normal infant's foot is broad anteriorly, the toes being well separated, the space being widest between the great toe and its neighbor. The great toe, standing separate from the rest, forms an adequate support for the mesial border of the foot, thereby preventing pronation.

Very early in childhood this type of foot becomes a rarity and we have in its stead a foot much more nearly approaching the deformed adult foot. That is, the toes are crowded together and the great toe no longer has a straightforward or even a forward-mesial direction, but is angulated more or less sharply laterally; thus it no longer supports the inner border of the foot and pronation results. This deformity is produced almost, if not entirely, by short socks and short shoes. The short sock and the short shoe force the great toe laterally, often almost to the midline of the foot and, in the plastic foot of the child, the new alignment soon becomes permanent. Ninety per cent of all our children patients are in socks that are too short and 75 per cent in shoes that are too short. A walk through a school-yard reveals that nearly all the children are in shoes that are too short or too narrow, or both. When standing with the full weight borne on the feet, the sock should allow the foot to stretch to full length and the shoe should be long enough to make the arch of the shoe and the arch of the foot correspond.

A short sock and a short shoe compel anyone to stand and walk with the feet everted and pronated in order to release the toes from being caught between the weight thrust of the body and the confining covering. Because this is so, "Short Socks and Shoes" is a frequent diagnosis as the small patient walks into the office. His everted and pronated feet tell his story—even though he has not complained; incidentally, no child under the age of seven will make verbal complaint of his footwear. So when I say to the mother, "Your child's shoes are too short," she answers in surprise, "He hasn't said a word about it so I had not thought of it." Often, too, when this information is given her, she promptly seats him on the examining table and says, "You are mistaken, they are plenty long enough." When the child is seated, she is right, they are long enough for the relaxed foot, but when standing they are not long enough for the extended foot.

Correction of the short sock and short shoe and correction of the weight-bearing line by elevation of the inner border of the heel still left me dissatisfied. We were evidently not at the full solution of the problem. Our small patients were still everting their feet and taking off from the inner border of the foot when wearing shoes. It wasn't until they were allowed to walk barefooted that the natural gait was assumed and this last observation led me about two years ago to advise a flexible-soled or moccasin type of shoe for all infants, and I now advise its continuance up to at least three or four years of age. This advice was received with much opposition by mothers because the custom always has been to put

the child upon a stiff sole as soon as he begins walking in order to support his feet. Here again custom has some warrant in fact. So long as stability while standing or walking in the infantile manner is the only consideration, the wide firm sole is of value. But the instant the child begins to develop the function of walking, the hard sole definitely prevents the development of this function. Here as elsewhere interference with function produces in time abnormality. The child, as yet unstable and with untrained muscles, cannot raise himself over the end of the hard sole, so must of necessity take off from the inner border with the feet everted. On the other hand, in the flexible-soled shoe the foot develops its grasping power, the take-off is over the ends of the toes (as the worn soles of this type of shoe will prove) and since the inner border of the foot is longer than the outer, the natural toe-in position is assumed.

Great joy comes as one watches the child walk naturally and gracefully. It is a pleasure to watch the lithe grace of the little ones literally walking on the toes, proving that the arch is being developed by use, that the tibialis anticus and the tibialis posticus are holding their own, gaining by development a foundation that even the future onslaughts of the calf group, aided and abetted by years of fashionable heels and soles, can't entirely wreck.

In conclusion, your attention is invited to the fact that neither in standing or walking can the body posture be correct when there is an abnormal relationship between the body and its supporting structures, the feet. Pronated and everted feet mean overstraightened lower legs; inward rotation of the femurs on the pelvis; lordosis with over-prominent hips and abdomen; anterior curvature of the dorsal spine with its attendant forward thrust of the head; the very postural faults that are so lamentably common.

Finally, such work as this, faithfully carried out, belongs to the physician. In carrying it out, he must give much of himself without immediate material gain, but he gains the consciousness within himself that he is making permanent contribution to the welfare of the race.

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The spiritual part of life is the substance, the temporal part is the reflection of it. Turn it the other way around and it does not work. The spirit is the master of the body. If one is in a state of spiritual health he is in a condition highly conducive to physical health. That is much more nearly true than to say if he is in a state of physical health he is necessarily in a condition conducive to spiritual health, for one may be very healthy physically and bad spiritually, and he may be very unhealthy physically for some reason, and still pretty good spiritually. But still it remains that, of the two states, the state of spiritual health is more important than the other, and more conducive to every sort of well-being.—Edward S. Martin, *Harper's Magazine*.

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Jesus was not, in the strict sense of the word, a social reformer. Instead of urging legislation or preaching social revolution, He contented Himself with arousing a new conscience that would itself gradually solve the problems. Indeed, the strength and power of His work lay in this very fact, that He declined to advocate specific reforms. He did something better; He set forth large principles which made reform inevitable.—Rt. Rev. Charles Fiske, D. D., *Harper's Magazine*.

## CARE OF THE EYES IN MIDDLE AND LATER LIFE †

By EDWARD JACKSON \*

DISCUSSION by Walter T. Hasler, Provo, Utah; Edward F. Glaser, San Francisco.

A SIGN of age commonly recognized and commented on is inability to read without glasses. "Old enough to wear glasses," "Can't see without glasses," are common phrases. The soft crystalline lens of childhood yields easily to the influence of its capsule, and by the natural elasticity of its fibers assumes the strongly convex shape of accommodation for near objects, when freed from the tension of its suspensory ligament. But with increasing rigidity of age it becomes less convex when released by the ciliary muscle, less able to focus near objects. The power to accommodate the eye for near seeing is first diminished, then lost. This is a universal change in the human eye that begins in early life, becomes obtrusive by the age of 40 or 45, and after that dominates all the use of our eyes. To meet it is naturally the first point in care of the eyes in middle and later life.

The wide discussion of the importance of cycloplegics in the measurement of refraction has drawn attention away from other points equally important in determining the exact focus of the eyes. It has been urged that the optician who calls himself an optometrist could not measure refraction accurately because he could not use cycloplegics, and it was assumed that, when a cycloplegic was not needed, in middle or later life, he could be trusted to fit glasses. It has been overlooked that the man whose primary purpose was to sell glasses, and whose only source of income was the regular commercial profit on the glasses he sold, could not do as good work in measuring the focus of the eye as one who only undertook to measure the focus of the eye and whose reputation and financial returns came only from his work in making such measurements.

It has been overlooked that diminished accommodation makes the accurate correction of refractive errors more important. One-half D. of astigmatism left uncorrected in an eye with 1 D. of accommodation may make more trouble than 1 D. of astigmatism in an eye with 3 D. of accommodation. Or 1 D. of hyperopia in the former may be as serious as 3 D. of hyperopia in the latter, each requiring the maximum exertion of accommodation to overcome the defect.

† Presented at the annual meeting of the Utah Medical Association.

\* Edward Jackson (314 Fourteenth Street, Denver, Colorado). M. D. University of Pennsylvania, 1878; C. E., 1874; A. M., 1878, and Sc. D., 1914, Union College. Practice limited to Ophthalmology since 1886. Present hospital connections: Consulting Ophthalmologist, St. Anthony's Hospital and St. Luke's Hospital. Previous honors and services: Chairman Section American Medical Association; President American Ophthalmological Society; President American Academy of Ophthalmology and Oto-Laryngology; Leslie Dana Medal; Lampert Lecture; Missouri Commission for the Blind, 1925; Emeritus Professor Ophthalmology, University of Colorado. Scientific organizations: Colorado Medical Association, American Ophthalmological Society, American Academy of Ophthalmology and Oto-Laryngology, Section on Ophthalmology, American Medical Association. Appointments: Member Colorado State Commission for the Blind. Publications: Manual of Diseases of the Eye, Philadelphia; Skiascopy; Ophthalmic Year Book; Ophthalmic Literature; American Journal of Ophthalmology, Denver.

It has been overlooked that damage done by eye-strain increases as the recuperative powers and nutritive resources of the body diminish with age; that results of the same strain, overuse, or indiscretion are more likely to do permanent harm after middle life than in youth; and that good vision becomes of relatively greater importance as the bodily powers fail in other directions. After middle life the accurate correction of ocular focus by glasses becomes relatively more important than in youth. It is poor policy to neglect them, or accept for their assistance inferior optical corrections. Some physicians have, for themselves and for their patients, been relying on opticians or optometrists for the correction of presbyopia, which cannot be accurately corrected until the error of refraction is exactly determined. Neglect of the needs of the eyes in later life as to glasses is neglect of reasonable care of health, aside from the important conditions recognizable under medical supervision that will determine the continued retention of good vision, or even life, to normal limits.

### THE RETINAL VESSELS AND BLOOD PRESSURE

It is generally understood that impairment of the circulation and degenerative changes in the walls of the blood vessels are the underlying causes of many diseases of later life, and frequently bring death. Increased arterial pressure is regarded as the most important forerunner and evidence of vascular degenerative change. It is the sign very generally relied on as an indication for treatment, or a basis for prognosis. But our understanding of the significance and importance of increased blood pressure is still fragmentary and maybe misleading. I was interested in hearing at this meeting that the height of the blood pressure should often be regarded as a family, sexual, or individual peculiarity. We know that increased blood pressure may be temporary, passing with its temporary cause either physiologic or pathologic. It is my impression, from comparison of the two sets of observations over some twenty years, that ophthalmoscopic examination of the retinal blood vessels gives more reliable evidence, as to the condition and probable future of the general circulation of the body than do tests of blood pressure made over a period of a few days or even of a few months.

In the retina we habitually study blood vessels of from 1/5 to 1/50 of a millimeter in diameter under an enlargement of from 10 to 20 diameters which brings out the presence, nature, and extent of alterations in the retinal vessels at an early stage, often before such vascular changes can be known or suspected in any other part of the body. The retina is an outgrowth of the central nervous system, closely allied in structure to the brain, in which many of the most serious results of pathologic changes in the blood vessels are later to be manifest. The changes in the retinal vessels may early furnish the key to the interpretation of obscure symptoms in other organs—the basis for intelligent prognosis, or the indication for treatment that, by early application, can arrest pathologic processes, prolong life

and make it more useful and pleasant through the added years.

The need for glasses with which to read and follow many of the more delicate mechanical occupations should bring every person of middle or later life under the observation of the physician specializing in ocular disease; whose medical training and associations fit him to search for and appreciate those signs of the dangers and disabilities of age that will make it possible to prevent and forestall some of the most common and serious accidents, limitations and afflictions that contribute to the unhappiness of age. Those that act through the impairment of vision are bad enough to justify a good deal of care for their prevention; and those that act otherwise than through the eye are of equal and greater importance. In the movement for better health through individual prophylaxis, the ocular examination will play a most important part.

#### CATARACT

About the causation of senile cataract we know little. We know something about traumatic cataract how it is produced, by mechanical injury. We know a little about the influence of heat in producing cataract. Experiment has thrown some light on cataract associated with tetany and diabetes. We know that the most common form of cataract is associated with advancing age; that of those who reach the age of three score and ten quite 70 per cent have unmistakable opacities in the crystalline lens. But of the underlying body changes that bring about senile cataract we know scarcely anything. With blood pressure, arcus senilis, the slower response to nerve stimuli and lessened nutritive activity it seems to have no direct connection, and with diet and elimination its connection is not clear.

But we do know that overuse and strain of the eyes hasten cataract; and we know that, of the large proportion of people who develop lens opacities by the age of 70, but few will ever be greatly disabled by them; and very few, perhaps one or two in a hundred, will ever have to face the question of operation for removal of cataract. To more people the fear of cataract is causing unhappiness, and often more serious unhappiness than does its actual presence and the limitation of activities that it causes. Two years ago I went over the histories of 539 people over 50 years of age whose eyes had lens opacities; and 108 of whom I had examined repeatedly over periods ranging from two to twenty-one years, an average of 5.6 years. From this survey the conclusion was drawn, that, on the average, the length of time that it takes for a cataract to become mature—to prevent useful vision and to require operation—is from fifteen to twenty years. Cataract beginning after 60 is not likely to mature until 80, and the later it is noticed the slower probably will be its progress. Of course cataract may develop more rapidly, as in diabetes or during attacks of influenza. But more people will be made happy by removal of the fear of cataract than by removal of cataract; although very few surgical operations have a larger percentage of good results to their credit than has cataract extraction.

Many people have partial cataract whose poor vision does not depend wholly or chiefly on the opacities of the crystalline lens. The changes which end in cataract begin with alteration of the refraction of the eye. Irregular astigmatism always arises, myopia often arises, regular astigmatism changes in amount and the direction of its meridians. Such changes may greatly impair the vision and their correction by change of glasses restore it. The eye that develops a partial cataract becomes more dependent on the kind of light it has to see by, which must be adjusted to its individual needs. Strong light striking a lens opacity in the pupil causes a diffuse illumination in the eyeball that objects have to be seen as through a fog.

In some eyes strong light contracting the pupil causes the blurring due to peripheral cortical opacities to be eliminated. In other eyes the dilatation of the pupil in a relatively feeble light will allow light to be focused on the retina, that enters the eye around a nuclear opacity. In the one case a weak solution of pilocarpin, by contracting the pupil, will help vision. In the other case a weak solution of atropin, just sufficient to give the right dilatation of the pupil, will bring a remarkable improvement of vision. For this purpose a solution of 1 to 20,000 may be sufficient. Later, or in another case, the solution may need to be ten times as strong. This must be determined by observation of the pupil and vision, under solutions of different strengths, and at different times after instillation, to determine what is the most favorable size of pupil and what proportion of atropin is required to keep it there. While mydriatics must be used cautiously in the eyes of old people, the fear of glaucoma should not prevent this use when needed. Compared with eyes that have more or less opacity of the crystalline lens, those that are in danger of getting glaucoma are very few.

#### GLAUCOMA

The danger of glaucoma is not confined to middle and later life, but it is much greater than it is in childhood and youth. Fortunately the danger of hardening of the eye is now known to physicians generally; but it is not properly met by refusing to prescribe atropin to elderly patients. An eye that is not specially predisposed to glaucoma will not get it from being subjected to a mydriatic; and if it is so predisposed will get it without any mydriatic. What the mydriatic may do is to provoke an exacerbation of high tension in an eye in which the tension is already elevated or likely to become so. Whether he puts mydriatics in eyes or not, the physician should be able to recognize glaucoma.

Early loss of accommodation used to be reckoned a sign of glaucoma, and haloes around a light seen at night may be significant. But many people lose their accommodation early who never get glaucoma; and haloes arise from various conditions in eyes that never become glaucomatous. The feeling of hardness to touch of the eyeball, and the impairment of the field of vision, are the most reliable signs of glaucoma with which every physician should be familiar. If he uses the ophthalmoscope, the "glaucoma cup" in the optic disk will also warn him of



the peril of the eye. It should also be remembered that vascular diseases of the eye and iridocyclitis often cause glaucoma, and that it may result from partial dislocation of the lens following a blow on the eye.

But the most important thing to remember about glaucoma is that treatment may arrest or prevent the loss of vision, but cannot restore that which has already been lost; or only in some cases that which has been lost very recently. Treatment should begin at the earliest possible moment, and usually the treatment will include operation. While making the arrangements for operation, or securing the patient's consent to operation, pilocarpin or eserine may be used to lower the tension of the eye as much as either will. If pilocarpin will bring the intra-ocular pressure down to normal, it is the drug of choice. But eserine is the more powerful drug, although it may provoke iritis, and should be tried in weak solutions at first. If either of these drugs contracts the pupil to the normal size, it is a good sign. But it must keep down the intra-ocular tension to normal, to be trusted any length of time.

In a few cases these myotics may keep down the tension of the eyeball until the cause of the rise has been removed, or by regular use may keep the tendency to hardening of the eyeball in abeyance over a long period. But usually the vision or field of vision continues to deteriorate and operation must be done. Sometimes a brisk purgative or enemas of strong sodium sulphate solution will reduce ocular tension and cut short an acute attack. But all these things depend on early recognition for their usefulness. To have glaucoma in mind and be able to recognize it, is the most important thing that most physicians can do to meet this danger to the eyes in later life.

#### OTHER DANGERS

Inflammation of the retina or choroid, or both, occurs sometimes in elderly people, due either to general disease or to strain from too constant use of the eyes, under unfavorable conditions. For these cases complete rest of the eyes, even in a dark room or under a light dressing, for a few days may be the first thing to attend to. But there must also be the most thorough search for probable causes for such a condition. The ophthalmoscope, by showing the character and grouping of lesions, will discriminate renal, vascular, diabetic and circinate forms of retinitis, or the presence of hemorrhage with either of these forms or due to thrombosis of the retinal veins. Other examinations will confirm the probable causation of the lesion. In any of them rest of the eyes from reading must be observed along with general regimen and special treatment of the particular condition found. In any of them the resources of the physician must be in full co-operation with the knowledge of the oculist.

#### PROPHYLAXIS

But the management of ocular disease in late life should be chiefly directed to prevention. Blindness and impairment of vision are common in later life, because of the effects of lesions acquired in earlier years, that accumulate as years go by, and because

of failure to recognize the limitations of age, rather than to conditions that truly come on and increase with age; and also on the extent and way that the eyes may be used to do what would be harmless if these limitations and conditions were carefully observed.

The eye-strain of youth, producing myopia, then will bring cataract or detachment of the retina in old age. The eye blinded by an injury that could have been prevented by wearing goggles remains blind to the end of life. But the person who has escaped such harms and used his eyes freely up to middle age must yet recognize and accept the need of glasses for presbyopia. The man who has smoked freely from boyhood must understand that in continuing to smoke as freely he is in danger of tobacco amblyopia, as well as angiosclerosis. The woman who has taken pride in her fine "fancy work" must be content to do less of it. The constant reader of other years must know that his periods of reading must be shortened. The lessened activity of nutritive processes, the diminished capacity of repair of injuries, the lessened endurance of age must be accepted if we are still to continue to be as useful and as influential in the world as we might be. It is one of the greatest of the functions of the medical profession in general to spread among the people an understanding of the real dangers and disabilities of age, and for themselves and their patients to preserve and keep fruitful what may yet be the most valuable years of life.

#### DISCUSSION

WALTER T. HASLER, M. D. (Farmers and Merchants Bank Building, Provo, Utah)—It is manifestly impossible to handle every phase of the subject announced in the time allotted for the paper read before this society. By paying close attention to every sentence read in this paper, we have a vast amount of valuable information for our use if we would apply it.

I have observed that people in middle and later life suffer a great many handicaps to their eyes through various forms of infection. A focal infection is likely to cause damage to the cornea through the production of ulcers and also inflammation of the iris and ciliary body; in fact, every structure of the eye from the optic nerve out. When one remembers how rapidly a corneal ulcer or an iritis will heal on cleaning up a focus of pus in the nasal accessory sinuses or the tonsils or the abscessed roots of the teeth, one is impressed with the importance of keeping people informed of the danger of such foci, in order to preserve their eyesight.

EDWARD F. GLASER, M. D. (391 Sutter Street, San Francisco)—It is to be regretted that Dr. Jackson's very practical and scholarly paper cannot be read by every thoughtful lay person over 40 years of age, as well as by physicians.

A tremendously important point is the necessity for the proper refraction of the presbyope whose eyes, with their lessened nutritive resources and diminished recuperative powers, can less stand eye-strain than can the eyes of youth. It has been too often assumed that because no cycloplegic was needed to refract a presbyope, any optician or optometrist could fit the correcting lenses. Dr. Jackson points out the fallacy of this assumption. The eyes in middle and later life need, if it were possible, even better and more careful refraction than that we give to youth.

In these days of the emphasis of the prevention of disease, should not every presbyope, as a routine of being given "glasses to read with," have a thorough examination of his fundus, his tension and field of vision taken and the periphery of the crystalline lens examined, as

well as the center seen through a small pupil. That is, the fitting of the proper glasses at all ages, and especially in middle and later life, is a definite medical problem and should only be done by the trained ophthalmologist, who can eliminate as factors in the defective vision various pathologic conditions which may be insidiously beginning if not already present.

Attention must be called to Doctor Jackson's "impression" that ophthalmic examination of the retinal blood vessels gives more reliable evidence as to the condition and probable future of the general circulation than do tests of blood pressure made over a limited time. Which, in the prevention of disease work, emphasizes the importance of the study of the retinal vessels during middle and later life, and the immediate consideration of the "presence, nature and extent of alterations" seen there before such vascular changes can be known or suspected in any other part of the body.

Doctor Jackson's paragraphs on cataract are most instructive. Of especial interest are his remarks on the causes of poor vision in incipient cataracts, his study of the effect of light in partial cataracts and use of pilocarpin or atropin, as case indicates. To be quoted is his conclusion that "more people will be made happy by removal of the fear of cataracts than by removal of cataract."

In his conservative remarks on glaucoma, the author emphasizes immediate diagnosis and treatment "at the earliest possible moment, and usually the treatment will include operation."

Since of all the God-given senses vision is the most important from the social, economic, intellectual, and pleasure-producing points of view, conservation of vision needs especial emphasis during middle age and later life, when the other physical limitations are gradually developing. So Doctor Jackson's remarks on prophylaxis and prevention are most timely and valuable.

**A Standard for Pituitary Extract**—One of the pleasing features of the Tenth Revision of the U. S. Pharmacopoeia is the inclusion therein of a definite standard of activity for pituitary extract. Inasmuch as pituitary extract is best known as an oxytocic, it is the effect of the extract upon the uterus of a virgin guinea pig that constitutes the official test. Some manufacturers, however, among them Parke, Davis & Co., apply the pressor or blood-pressure-raising test as well, since pituitrin (pituitary extract, P., D. & Co.) is administered for its effect upon the arterial system in hemorrhage and other conditions, and for its regulating effect upon both the intestinal musculature and the musculature of the bladder. It is impossible for the physician to judge of the activity of a pituitary preparation by physical examination of it. Manufacturing methods have made it possible to produce pituitary extracts not only far below the standard, but far above it; hence the urgent necessity of the pharmacopoeial requirement in the interest of definite dosage. In this case, however, as in many others, the physician is dependent upon the manufacturer not only because he himself has none but clinical means of testing the activity of the product, but because the products of different houses vary, and possibly also the product of the same house at different times. A manufacturing concern of recognized scientific standing is really the only guaranty of quality that the physician has.

There is, of course, no doubt that oral sepsis is often intimately associated with that condition known as "poisoned heart" and is a factor in its causation of the first importance. As to whether septic conditions of the mouth are secondary to those of the gastro-intestinal tract is still a moot point. Many believe that the origin of a great deal of oral sepsis is gastro-intestinal disorders and intestinal stasis in particular. However, it is certain that oral sepsis aggravates bad gastro-intestinal conditions and vice versa. A vicious circle is formed which can be broken only by rational means.—M. J. and Record.

An Indiana judge has ruled that in future truancy cases he will sentence the parents to one day in the county jail for each day their children miss school without good reason.

## FAVUS

By KENDAL P. FROST AND GEORGE F. KOETTER \*

*The geographic distribution of favus is peculiar. It is common in France, Scotland, and Russia. In the United States it is not infrequently seen in immigrants, but is very rare in natives. Favus of the scalp in adults, especially natives of the states, is excessively rare. We wish to call your attention to this case of favus in an adult resident of California.*

DISCUSSION by Ralph R. Campbell, Los Angeles; George D. Culver, San Francisco; Hiram E. Miller, San Francisco.

**E.** R. I., age 45, was seen on February 5, 1925, complaining of scalp trouble of three and one-half years' duration. He was born in Virginia and has resided in Massachusetts, Wyoming, and for the past fifteen years in California. He thinks the condition was contracted from a person who used his comb and brush. Within ten days he noticed an itchy area in the occipital region, and following this many new similar areas appeared, scattered throughout the scalp, in spite of vigorous applications of proprietary preparations.

The patient describes the initial lesions as: "A small pustule forms around the hair. After several weeks it grows wider and deeper, and a thick crust forms. The lesions last months, and there is a constant increase in their number. Several crusted areas in the scalp had a tendency to conjoin. The sensation is one of burning and itching. On the nape of the neck some relief was obtained by extracting the hair, but this did not stop the scab formation." The areas in the scalp are remarkable for their crust formation and duration, and in no bald areas has there been any regrowth of hair. In the infected areas the hairs were easily removed, and without sensation.

**Examination**—Careful search failed to reveal any scutula, although the entire scalp was covered with a thick, brownish, greasy scaliness. No mousy odor was detected because of the constant application of creolin. Scattered throughout the scalp were many discrete, irregularly shaped, sharply defined, pea-to dime-sized depressed areas, covered with a thin pink, glistening, atrophic scar, and totally devoid of hair. Interspersed were tufts of hair that had survived the attack.

In right eyebrow and bearded region, at angle of jaw, were dime-sized areas, erythematous, tender, with loss of hair, bathed in pus and covered with a thick, firm crust. On removing the crust there was a depressed, moist, bleeding surface, but no scarring present.

On the nape of the neck there was an irregular-shaped patch, slightly depressed, about 2.5 by 7.5 cm. covered with a thin, glistening cicatrix. At one end of this patch there was a dime-sized area of activity with crusting, moisture, and tenderness. On removing the crust there remained a raw, bleeding surface. There was no involvement of the nails.

\* Kendal P. Frost (523 West Sixth Street, Los Angeles), M. D. Rush Medical College, 1916. Practice limited to Dermatology and Syphilology.

\* George F. Koetter (831 Pacific Mutual Building, Los Angeles), M. D. University Cincinnati. Practice limited to Dermatology. Hospital connections: St. Vincent's, Children's Hospital, Los Angeles.



**Cultures**—Scales and hairs were soaked in alcohol for several hours, then transferred to acid agar and Sabaroud's media and grown in the dark at room temperature. No fungus could be cultivated, the growths being mainly secondary contaminators. Scales and hairs soaked in 15 per cent K O H revealed abundant, branching mycelia and spores.

**Treatment**—On February 9 the patient received an epilating dose of x-ray following the technique of Adamson-Kienbock. Fifteen days later there was beginning epilation and practically no tenderness in the active areas. One month after the x-ray exposure there was almost complete epilation. At two months all areas had healed over, with the exception of large area on nape of neck.

A 3 per cent ammoniated mercury ointment was applied to the scalp daily, beginning six weeks after epilating dose of x-ray. At present all lesions have completely healed with scar formation, except a dime-sized area on the nape of the neck. This area constantly crusts over, but no spores or mycelia are demonstrable.

#### DISCUSSION

RALPH R. CAMPBELL, M.D. (Brockman Building, Los Angeles)—Frost brings this matter to our attention because it is an unusual condition to find in an American-born. It is decidedly unusual for favus to appear for the first time at the age of Frost's patient, namely, 42 years.

Hutchinson claims that, of a series of forty-four cases, he has never seen but one that first presented later than the fifteenth year of life. This one exception was 17 years old when first presenting himself for treatment.

Favus occurs in both sexes, but decidedly more frequently in the male and may involve not only the scalp, but any portion of the body. The progress of the malady is exceedingly slow, so that months often elapse before there is much involvement, the disease sometimes limiting itself to an irregular area of one or two inches in diameter. Not infrequently, while the first patch increases gradually, new foci show themselves in one or more, near-by or remote parts of the scalp. In some instances, especially near the border of the crusts, are seen pustules or suppurating points.

Frost calls attention to the fact that there was no scutula in his case, which in my experience is rather unusual, for these scutula, or crusts, usually form to a greater or less degree before the pustules appear and sometimes present themselves in rupoid shape.

A mistake in diagnosis is easily made as between favus and seborrhea, the latter giving off a greasy scale if pressed between two sheets of tissue paper, while the same procedure with favus will not leave any evidence of having been treated in this way.

We hope that the day is not far distant when the physician at large will realize more fully than now the importance that dermatology plays in the practice of medicine, and digest the fact that the general physical condition of the patient cuts a very large figure in the treatment or management of almost any skin disease.

While we are on the subject of favus it might not be amiss to renew attention to a few facts with reference to the hair and the scalp generally.

Certain diseased changes in the hair have for some time been recognized as due to the action of grosser parasitic micro-organisms, as in ringworm and favus; in other conditions, as in dermatitis seborrheica, the disturbance in the nutrition of the hair is believed to be caused by the presence of smaller organisms, as cocci, and some have claimed a parasitic cause of alopecia areata; in others, as in folliculitis decalvans and dermatitis papillaris capilliti, the loss of hair is due to pus organisms. All these are excluded from the present consideration.

But there is a much larger and very important group of disturbances of the hair which are caused by derangement of nutrition and innervation going on within the

follicle, which it is well to consider from a broad point of view. We all know that certain physiologic states of the system are attended with conditions relating to the growth, atrophy, and changes in color of the hair, and we can thus readily understand how pathologic conditions can induce similar or dissimilar alterations in the hair structure.

That we do not yet fully comprehend all the reasons for this, nor the exact methods in which they occur, is no reason for our not seeking to understand the relationship of these affections, or some of the causes which are apparently connected with them.

GEORGE D. CULVER, M.D. (323 Geary Street, San Francisco)—It is the unusual that often lends greatest interest to a case report. Frost and Koetter's excellent report of a case of tinea favosa has that feature as originating in the United States, and as being of the scalp of a man over 40 years of age. I have never seen an instance with a similar history. However, one might wonder there aren't more, since every immigrant with favus has the potential element of contagion with him. The fact that it was in a man who must have been over 40 before he noticed the condition is rare. Just how long the condition might have been present before he was conscious of it is a question.

We do know that the unusual does occur in skin affections, and especially conditions due to parasites. The fact that favus has such a tendency to persist would seem to indicate the possibility of its affecting the adult scalp even more frequently than we see it in this country, and even more than would the ordinary fungi found on the scalp in children.

The chronicity of fungus infections gives us a lot to think about, whether it be tinea of the scalp, tinea barbae, or the more prevalent epidermophyton inguinale infection. Always the question arises as to why the individual selection. It will some time be one of the most important factors to be considered.

HIRAM E. MILLER, M.D. (384 Post Street, San Francisco)—Favus is a rare disease in California. It is frequently encountered in New York City in immigrants, but they seldom reach the West. I have seen three cases in the University of California skin clinic. They were all in adults who had contracted the disease outside the United States during childhood. They came to the clinic for other complaints, and the favus infection was discovered on routine examination. They, like many of their immediate forebears in Europe, had learned to accept the disease as one of little consequence and refused to have it treated. The fungus was easily demonstrated and grown in all three cases.

Frost and Koetter's case is unique in many ways. It was contracted in California; it was in an adult 42 years of age; it had run a rather rapid course for favus; there was considerable pus in many of the lesions, and there was no mousy odor or scutula present. In view of the fact that the diagnosis was mainly made on the microscopical picture of the fungus, I think it would be worth while if they would describe it a little more in detail.

DOCTORS FROST AND KOETTER (closing)—In answer to Campbell's and Miller's question, the patient never allowed crusts to remain on lesions long enough for the formation of scutulae. We believe this is the reason for absence of these lesions. In the microscopic picture there were many irregularly shaped, branching mycelia.

The new era in medicine which the physician of the future must be prepared to enter must rest on the foundation of a wide and comprehensive plan of personal and public health education. Professional policies, narrowly conceived, can never successfully oppose the rightful interest of the public. The failure properly to educate the public regarding the achievements of medicine and its importance in the preservation of life and the prevention of sickness may be considered as such a policy.—Wendell C. Phillips, M.D., *Journal A. M. A.*

Emerson, the Indiana University Medical School, says that disease is necessary to give the body practice in gaining immunity. To an unscientific mind this sounds like the old lady who kept a horse for the sole purpose of going after the oats.—Howard Brubaker.

## THE OPERATIVE TREATMENT OF RUPTURE OF THE MALE URETHRA

By FRANKLIN FARMAN\*

DISCUSSION by Arthur B. Cecil, Los Angeles; Miley B. Wesson, San Francisco; Granville MacGowan, Los Angeles.

THE operative treatment of rupture of the male urethra may be divided into two phases, the first having to do with the surgical problem arising from urine retention and extravasation; and the second having to do with repair of the urethral injury. This discussion is limited more to the treatment of injuries of the posterior urethra caused by stricture formation and its attendant misfortunes, and does not embrace a discussion of traumatic rupture, although the surgical principles involved are much the same.

### DISCUSSION OF THE TREATMENT OF URINE RETENTION AND EXTRAVASATION

Rupture of the posterior urethra, from any cause, becomes immediately a serious problem because of the danger of urine retention, extravasation, and infection. A review of the literature places the mortality in such cases anywhere from 20 to 50 per cent, depending upon the site of injury. Sir Benjamin Brodie, in 1849, stated that "the danger from effusion is not the same in all cases. In the majority, the effusion takes place in front of the triangular fascia of the perineum, or else the fascia gives way and allows the urine to pass forward to the superficial parts instead of penetrating to the deep-seated; and under these circumstances life may generally be preserved by the prompt interference of the surgeon. In a very few cases the effusion extends into the loose, cellular membrane which surrounds the bladder, and the patient's condition is hopeless."

Early diagnosis, an appreciation of the gravity of the situation, and prompt operative interference are necessary to forestall or mitigate the septicemia and combat the uremia. Delay is dangerous, and one should always remember that the general symptoms of rigor, delirium, or coma may mask the true local condition.

In contradistinction to traumatic cases, the extravasation is not necessarily confined to those planes defined by the anatomist. The infected, extravasated urine invites infection and suppuration, which breaks down anatomical barriers, permitting infiltration of the deep, as well as the superficial tissues.

### ROUTE OF EXTRAVASATION OF URINE

Extravasation through an opening in the bulbous urethra seeks first the superficial perineal tissues in front of the anterior layer of the triangular ligament. From the perineum, the extravasation spreads to the scrotum, guided in this direction by the deep layer of Colles' fascia, and thence to the abdominal wall through the opening left between the pubic

spine and symphysis. Extravasation between the layers of the triangular ligament results from rupture of the membranous urethra and soon breaks the confines of this limited space, spreading, then, either to the ischio-rectal fossae or into the perineum. Extravasation, posterior to the deep layer of the triangular ligament, usually results fatally because of involvement of the peri-vesical and peri-rectal structures.

Frequently, extravasation proceeds more rapidly on one side than on the other, due to the fact that the perforation has occurred in the lateral wall of the urethra. The usual site of injury is the floor, or lateral wall of the urethra, in its bulbous or membranous portion. The roof, or so-called surgical wall, of the urethra is rarely ruptured except in very severe traumatic cases.

### CHOICE OF OPERATIVE PROCEDURE

There are three methods of operative procedure available in attacking a case of rupture of the deep urethra associated with urinary extravasation. The main consideration is to relieve intra-vesical tension and to admit free escape of urine and inflammatory products.

*Method I*—Multiple incisions only of the peri-urethral abscess and infiltrated areas. Sometimes a simple incision of the abscess in the perineum performs, as it were, an external urethrotomy, permitting the free escape of urine and pus. However, if the opening in the urethra is small and laterally placed, simple incision will not relieve the retention and pressure behind the stricture and injured urethra.

*Method II*—Multiple incisions combined with suprapubic cystotomy. This method is recommended by some writers, and in recent years has gained increasing favor. Relieving acute retention and diverting urine by this route is applicable, especially to the early case. It has the added advantage of retrograde catheterization in cases of impervious urethra. Furthermore, it permits of free inspection of the bladder cavity for possible stone or vesical neck obstruction.

Drainage through a suprapubic cystotomy opening secures for the damaged parts rest and cleanliness, promotes prompt resolution, and encourages softening of cicatricial deposits in case of stricture.

The disadvantages of suprapubic drainage are, first, the danger of deep pelvic cellulitis in the case of Retzius, brought about by a cystotomy incision traversing infected, superficial planes; and second, depression of renal function to a fatal termination in cases of badly damaged kidneys.

*Method III*—Multiple incisions combined with perineal cystotomy. By many this is considered the method of choice. It provides free bladder drainage with a minimum of shock or hemorrhage, relieves tension fully, and minimizes the danger of deep pelvic cellulitis. The operation is carried out with or without the aid of an urethral guide or staff. In cases of impervious urethra, the median perineal section is made, based upon a knowledge of anatomical landmarks and relationships.

The dangers of the operation are injury or un-

\* Franklin Farman (1501 South Grand Avenue, Los Angeles), M. D. Rush Medical College, 1917. Practice limited to Urology. Hospital connections: California Lutheran, Anita Baldwin and Hollywood Hospitals, and Graves Memorial Dispensary.

controllable hemorrhage of the bulbous spongiosum, perforation of the rectal wall, or failure to find the proximal end of the ruptured urethra. Incision, or injury to the bulb, in some cases results in subsequent impotency.

#### TREATMENT OF THE INFILTRATED TISSUES

The infiltrated tissues are treated by multiple incisions. Fewer, but larger incisions, are recommended by Barley and Huddy. The incision should be of sufficient depth to penetrate the limiting fascia.

#### AFTER-TREATMENT

The immediate post-operative treatment is very important. With relief of urine retention, further extravasation ceases, but there still remains the danger of spreading cellulitis. This can be partially prevented by the injection of hydrogen peroxide into the infiltrated tissues to destroy the anaerobic organisms responsible for the cellulitis. The septicemia, uremia, and renal depression are best combated by the administration of fluid, subcutaneously or intravenously, to dilute the toxins and stimulate elimination.

Hot, moist dressings and, as soon as the patient's condition permits, Sitz baths hasten absorption from the infiltrated parts. Repair of the perineal fistula should not be undertaken until all infection has subsided.

**Repair of Perineal Fistula**—The success and technique of closure of perineal urethral fistulae depends upon the size, location, and complications. Small fistulae tend to close spontaneously as soon as infection and inflammation subside. Closure frequently can be hastened by the passage of sounds at intervals. Obviously, stricture or tortuosity of the urethra, distal to the fistulous opening, retards or prevents closure—consequently, these conditions must be treated by proper urethral instrumentation.

Larger and persistent perineal fistulae require operative repair, the technique of which covers a wide and difficult field of plastic surgery. The salient features of the surgical treatment in general are: (a) Removal of the cause; (b) restoration of the impaired urethra; (c) provision for bladder drainage during the repair of the defect; (d) control of infection or active inflammation before beginning any operation of repair. Drainage of the bladder during the healing of the plastic operation for the restoration of the urethra is especially important. The method of drainage employed, whether by retention catheter or suprapubic cystostomy, seems to be as much a matter of personal choice as of established rule, as successes are ascribed to both methods. Many ingenious methods have been devised for restoration of the fistulous urethra, including auto-plastic and hetero-plastic procedures.

A commonly employed technique for the closure of a simple perineal urethral fistula, is by excision and suture. With a urethral sound or catheter in position, the fistulous tract is carefully dissected free down to the urethra and excised flush with the lumen. The opening in the urethra thus left is closed by interrupted non-penetrating sutures of fine chromic catgut. The perineal incision is carefully closed by tier approximation and a small drain

carried to the center of the wound. Provision is made for temporary bladder drainage, either by retention catheter or suprapubic cystostomy, or both.

Large defects in the urethral wall can be closed in the above manner if the lips of the urethral wound are barely approximated with interrupted sutures, not tied under too great tension. The urethral mucosa regenerates rapidly and quickly spans the gap, if infection and inflammation are absent and the urinary flow is diverted.

Following restoration of the urethra, it is important to prevent subsequent stricture formation by the passage of sounds at regular intervals.

#### CASE I. Peri-urethral abscess. Perineal fistula. Ureterorrhaphy.

**History**—Mr. R., age 50 (referred by E. A. Huff), was admitted to the hospital April 4, 1924, exhibiting the major symptoms of peri-urethral abscess, extravasation of urine, and vesical retention. There was moderate shock, rigor, and pain, better described as "agony." The immediate past history disclosed recent unsuccessful ure-



No. 1. Case I—Perineal slough, extending to deep urethra following extravasation of urine.

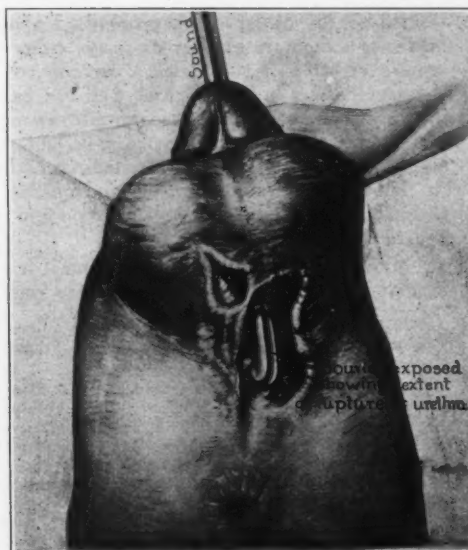
thral instrumentation followed by progressive pain and swelling in the perineum, increasing difficulty and gradual diminution of the urinary stream, until finally complete stoppage occurred the day of admittance. Medical history included a gonorrheal infection at the age of 20, and intermittent treatment during the past seven years for stricture.

**Physical examination**, aside from the findings characteristic of moderate shock and approaching uremia, showed the bladder distended to a point about two-thirds the distance to the umbilicus, moderate edema, bluish discoloration of the scrotum, and marked tumefaction and infiltration of the tissues of the perineum at the base of the scrotum, pointing just to the left of the midline. The prostate was greatly swollen, four times the normal size, tender, but not fluctuant. Subnormal temperature at time of admittance rapid, weak pulse, and a leucocytosis of 45,000, with a differential count of 90 per cent polymorphonuclear.

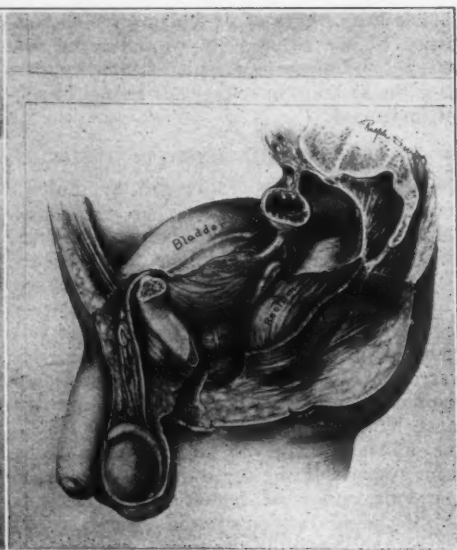
**Operation**—Immediate operation for the relief of the acute retention was undertaken. Morphine with atropine was administered, which, in his state of toxicosis, was sufficient to produce anesthesia. A filiform, followed by a Le Fort catheter No. 14, was passed easily and 500 cc. of foul, bloody urine, withdrawn. Next, a wide, deep incision was made over the point of prominence in the perineum. Through this incision the finger could be guided through the prostatic urethra into the bladder, performing external urethrotomy. A rubber tube was inserted for drainage. Eight hundred cubic centimeters of normal saline was administered by hypodermoclysis while still in the operating-room, which procedure, in his case, I feel was life-saving. Hypodermics of digifoline and normal saline per rectum were given for the next forty-eight to seventy-two hours.

Improvement was rapid, the signs of uremia disappeared, and the only symptom causing alarm was the





No. 2. Case I—Sound exposed, showing extent of rupture of the urethra.



No. 3. Case I—Sagittal section, showing route of extravasation of urine from rupture of the deep urethra.

persistence of intermittent attacks of hiccough for three days. All the urine drained through the perineal opening. The bladder was irrigated every few days with warm boric solution through a Le Fort catheter passed upon a filiform.

Within two weeks following the perineal incision, the tissue slough about the wound separated, leaving a deep cavity at the base of the scrotum extending to the deep urethra.

At the time of discharge from the hospital, eighteen days after admittance, the perineal wound was gradually filling in with healthy granulations, all the urine escaping through this fistula.

**Ureterorrhaphy.**—One month later the patient returned to the hospital for repair of the perineal fistula. The operative findings showed the sinus to involve the posterior wall of the bulbous urethra, just distal to the membranous urethra. The rent in the urethra was about one inch in length and one centimeter in width.

The plastic repair of the urethra was accomplished by widely exposing and dissecting free the lips of the sinus, uniting the torn edges of the urethral wall with interrupted, fine chromic catgut sutures tied over a soft rubber catheter, F. 19. It was barely possible to bring the lips of the fistula together because of the extent of loss of wall and the inelasticity of the urethra. The urine was diverted through a suprapubic cystotomy opening.

Convalescence proceeded satisfactorily, with the exception of a urethral chill one week after operation, which was followed by diarrhea, lasting five days. The suprapubic drainage tube was removed two weeks after operation and the indwelling urethral catheter one week later, following which the patient voided normally, but with the escape of some urine through the perineal wound.

**Result.**—Sounds were passed at irregular intervals, control of urination returned, and the perineal sinus closed, with the exception of a minute opening, which continued to dribble a few drops of urine with each act of urination for five months.

The patient has a sense of numbness in the penis and scrotum, and there is complete loss of erectile power. His general health, weight, vigor, and earning capacity are better now than at any time during the past few years.

#### CASE II. Fatal extravasation of urine.

Mr. B., age 46 (referred by J. P. Mortensen), November 13, 1924. History of long-standing, chronic urethral and bladder disturbance, due to stricture. Ten days before I saw him, under ether anesthesia, a small cyst en-

closing a stone had been removed from the shaft of the penis, near the base. At the same time, a No. 24 French sound was passed without any apparent difficulty, except a sense of tightness in the deep urethra. An indwelling urethral catheter was inserted. The catheter drained urine satisfactorily for a few days, and then ceased to function. Gradually there appeared swelling, redness and infiltration of the scrotum, penis, and perineum. The infiltrated tissues were incised and drained, but the patient's general condition grew worse and the



No. 4—Gangrene of genitalia, following urinary extravasation.

local genital infiltration spread to the left abdominal wall, groin, and back.

**Physical Examination.**—Man about 45 years of age, of medium stature and frail build. Facies drawn and pallid; tongue dry and parched. Subnormal temperature; rapid, weak pulse, 120 per minute. Locally, there was marked swelling, discoloration and infiltration of the

genitalia, perineum, left groin and abdomen, which extended around to the back. There was a sloughing, discharging wound of the perineum, and a gangrenous ulcer on the penis, the site of the excised cyst. The prostate was moderately enlarged, swollen and tender; base of bladder, boggy and sensitive; marked distention of abdomen, with tympanites throughout.

**Operation**—Under ether anesthesia, a suprapubic cystotomy was done. Purulent fluid and serum escaped from the tissues upon incising through the recti muscles. The stylet of the indwelling catheter was found to be approximating the fundus of the bladder, which probably accounted for the poor bladder drainage. This was left in situ and adjusted to proper position. A large amount of purulent urine was washed from the bladder cavity. The inner wall of the bladder was heavily trabeculated, denoting long-standing urine obstruction.

Multiple deep incisions were made in the infiltrated tissues of the left abdomen, perineum, and genitalia. Purulent, fecal-like material escaped from these wounds. One liter of normal salt solution was given subcutaneously while the patient was still on the operating-table. Pulse rate at the close of the operation was 140 per minute. The patient died eight hours following the operation. An autopsy was not obtained.

**Diagnosis**—Extensive extravasation of urine into the superficial and deep tissues of the perineum, genitalia, groin, and left abdominal wall; rupture of the posterior urethra, either in its membranous or bulbous portion; acute retention of urine; and overwhelming septicemia and uremia.

#### DISCUSSION

ARTHUR B. CECIL, M. D. (Pacific Mutual Building, Los Angeles)—The treatment of rupture of the male urethra is one of the most individual of treatments. The condition is usually due to one of two things: slow extravasation of urine back of an almost impassable stricture or acute extravasation of urine due to a fall in which the urethra is crushed against the pubic bone.

To first discuss ruptures and extravasation back of tight strictures: These patients are usually much more seriously ill than one would think at first sight. They have had kidney damage, as a rule, and also, as a rule, the urine is infected. Following almost any kind of manipulation they react badly, and I am extremely fearful of many cases of tight stricture, particularly where rupture and extravasation have occurred. If the extravasation is great, incision of the tissues is necessary, but if the extravasation is not great, and if one can dilate the stricture by filiforms and followers enough to introduce a small drainage tube into the bladder, subsidence of the local condition will usually occur.

Extremely persistent perineal fistula may follow incisions of the urethra back of the strictures, so that I feel that if the condition can be handled by catheter in the urethra a great deal is to be gained. The important thing in these cases is to bear in mind the seriousness of their general condition.

In the cases of rupture of the urethra, due to trauma in the perineum, if a retention catheter can be put into the bladder early it is probably one of the best methods of treatment.

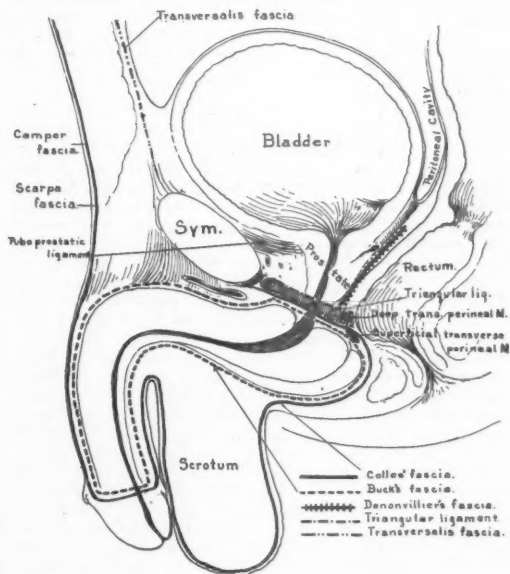
A few years ago I reported a case of this kind in the *Journal of Urology* in which a man who had fallen across a beam had developed in the perineum a very large sac-like formation in the perineal urethra. The patient urinated into this sac, then by manual pressure squeezed the urine from the sac out through the urethra. At operation, a mucous-lined sac as large as an egg was found, into which the bulbous urethra projected. A plastic operation was done in which urination was normally established.

Doctor Farman's splendid care of these two patients shows the great ingenuity one must display in caring for conditions which are so multiple in their manifestations.

MILEY B. WESSON, M. D. (1275 Flood Building, San Francisco)—This paper is very valuable, as it represents one of the few contributions to the literature of the subject of urinary extravasation incident to rupture of the urethra. The condition is one of the most complicated that comes to the urologist's attention, and its treatment

calls for the rarest skill and judgment, as indicated by the all too frequent fatalities that follow unscientific therapy.

Three types of urinary extravasation are commonly encountered: between the layers of Buck's fascia; within the superficial perineal space and distal to the deep layer of the urogenital diaphragm. If the rupture occurs anterior in the urogenital diaphragm, and the opening is through the dorsum of the corpus spongiosum, the fluid is confined between the layers of Buck's fascia surrounding the corpus cavernosum. However, the common pathway is ventral and the urine is confined temporarily by Colles' fascia, and because of the dense fascial partitions within the superficial perineal interspace, the fluid tends to pass from the perineum down to the scrotum and then up over the pubes. In early stages, the extravasation is unilateral; later, both sides of the scrotum, as well as the penis, down to the glans are involved, and the fluid may pass up as far as the axilla. If the rupture occurs distal to the urogenital diaphragm, the extravasation is held forward by Denonvilliers' fascia and, by dissecting up the peritoneum from the bladder, passes into the space of Retzius, or it may extend posteriorly up to the diaphragm and eventually even pass through the inguinal rings and appear on the abdomen. (The diaphragm graphically illustrates the circumscribing fascia.)



Although extravasation is commonly considered as a complication occurring after rupture of the urethra by external violence or periurethral abscess, it is not unusual to find it following the unsuccessful passage of a sound or even a velvet eye catheter on a stylet. The point of the stylet tends to slip through the eye of the catheter and penetrate the space of Retzius, the weakest portion of the urethra being the roof immediately behind the triangular ligament. When force is used in passing a sound, a slight tear is often made in the wall of the urethra. This heals spontaneously unless a solution of potassium permanganate is used afterward as an irrigation, in which case there is inevitably a slough and extravasation.

Any case presenting the inability to void should be considered an emergency and operated upon immediately, for if extravasation is not relieved death always results from sepsis. The use of a retention catheter should be restricted to those cases that can void, i. e., cases of partial rupture. In cases of complete rupture, even if a catheter can be passed, a practically unmanageable stricture results, while repeated unsuccessful attempts cause false pockets and increase the variety of infection organisms. An external urethrotomy should be the routine



procedure, reserving the suprapubic incision for cases complicated by rupture of the bladder.

Wherever there is urine beneath the skin it must be evacuated. Only a few years ago "bold" incisions through the skin and fascia were made, and this relieved the beginning cellulitis. However, after the patients were well from the effects of their extravasation, skin grafting was necessary to cover the exposed granulating areas, due to the retraction of the skin. In order to avoid this latter maneuver, gridiron incisions came into popular favor; no cuts were longer than one inch, but the cuts were only one inch part. These incisions, of course, are of no value unless a finger is slipped down into each incision and the region beneath connected by means of this blunt dissection.

I have obtained the best results with Dakin's solution, using many tubes and frequent injections. In large incisions dichloramin-T is easier to use than the Dakin's solution. After the acute condition has disappeared or the Dakin's is beginning to burn the skin, 5 per cent mercurochrome solution is substituted. Hypodermoclysis of not less than 3000 cc. of saline is used routinely immediately after operation, and this is repeated daily as long as indicated and without any fear of incommencing the circulatory system.

If following the removal of the perineal drainage tube the patient has a sudden elevation of temperature, the tube must be replaced immediately as a secondary extravasation is occurring, the fistulous tract not retaining its continuity. Incidentally, the tube cannot be replaced with the patient lying prone. He must be placed in the extreme lithotomy position used when the tube was first inserted.

During the war I saw at an evacuation hospital near Verdun a patient who had been wounded in the perineum. When a catheter was passed intra-urethraly into the bladder, it was visible through the frayed urethra at the bottom of the perineal wound. The shrapnel had done a perfect debridement (i. e., because of the great circumference of the wound, it was relatively shallow and there were no pockets). At the end of seventy-two hours, the bottom of the wound was filled with granulation tissue, so that the patient voided without any perineal leakage. As he was immediately evacuated to a railroad, I lost track of him and do not know, but I presume no fistula followed.

Urethral mucosa grows with such amazing rapidity, that grafting or approximating the cut ends is by many considered unnecessary. When a prostatectomy is done, practically the entire mucosa of the posterior urethra is removed along with the tumor. The surgeon is not interested in the preservation of the mucosa, but rather in the removal of all loose strands of mucous membrane that might eventually cause obstructions to the lumen.

Ordinarily, in cases of ruptured urethra, if bladder drainage is provided and the two ends of the cut urethra are placed as near together as possible so that a sound will readily pass to the bladder, nothing need be feared as to the ultimate result.

The drainage should be, unless otherwise indicated, by indwelling catheter with continuous suction. This will, as a rule, prevent the passage of urine around the catheter. There is necessarily a certain amount of maceration between the walls of the urethra and the catheter (which remains in position about two weeks), and this causes the stitches to slough. Five per cent mercurochrome should be injected daily into the bladder, so that if there is any leakage about the catheter it will be sterile.

Doctor Farman is to be congratulated upon the successful way in which he treated the first patient and the scientifically accurate method of treating the second.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—The treatment of rupture of the male urethra, if the results to be obtained are to be worth while, requires boldness, good anatomical knowledge of the perineum, resourcefulness, and patience. The subject is entirely too extensive to be covered in any short article or to be discussed intelligently in a few words.

It is only in large industrial centers or in general hospitals that enough material ever gets into the hands of any one man for him to reasonably and intelligently master the subject of the handling of these cases.

I have been much interested in Farman's report of his

case of Mr. R, age 60, and I congratulate him upon a very excellent result obtained by his treatment. The only thing in his article which definitely calls for criticism is paragraph 6, "After-treatment," where he states: "The immediate post-operative treatment is very important. With relief of urine retention, further extravasation ceases, but there still remains the danger of spreading cellulitis. This can be partially prevented by the injection of hydrogen peroxide into the infiltrated tissues to destroy the anaerobic organisms responsible for the cellulitis." This is a doctrine which is dangerous. Hydrogen peroxide does not destroy any malignant organisms, but because of the manner in which it spreads through the tissues by reason of its release of the oxygen, it tends to spread the disease and not to check it. It has been many years since I have known anyone to advocate the use of hydrogen peroxide for this purpose. Years ago, when the mistaken idea of its disinfecting and cleansing powers had great hold upon the profession, such a doctrine would have been regarded as orthodox.

### ELECTRO-DESICCATION AND ELECTRO-COAGULATION AS A MEANS OF DESTROYING BENIGN AND MALIGNANT SKIN LESIONS

By ERNEST K. STRATTON \*

*Electro-desiccation destroys skin lesions with comparatively slight trauma to the tissues; therefore, a minimum amount of scar formation results. This, as well as its use in the treatment of lesions of the tongue and mucous membrane of the buccal cavity, is of special importance to the dermatologist.*

*Electro-coagulation destroys malignant lesions in a rapid and effective manner with a minimum amount of harm to the surrounding tissue, sealing the blood and lymph channels, which lessens the likelihood of metastasis and makes the operation bloodless.*

DISCUSSION by Harry E. Alderson, San Francisco; Ernest Dwight Chipman, San Francisco; J. Cameron Pickett, San Francisco; Moses Scholtz, Los Angeles; Howard Morron, San Francisco.

**E**LECTRO-DESICCATION and electro-coagulation are the terms introduced by William L. Clark of Philadelphia to express the thermic effects on living tissue produced by the action of the unipolar and the bipolar high frequency currents.

This therapeutic agent was first used in surgery in this country about fifteen years ago by Clark, who claimed for it many advantages over other destructive methods. Since that time little that is really new has appeared, yet the interest in it has been unusually great. The method has not been universally adopted by dermatologists, but each year many more are becoming interested in it, and those who have mastered the technique are enthusiastic over their results, and are so recording them in the literature.

While my experience has been more or less limited, the results obtained are encouraging.

The purpose of this paper is to record these experiences with the hope of stimulating the interest of other physicians to use this therapeutic agent.

The heat effects vary in degree according to the

\* Ernest K. Stratton (490 Post Street, San Francisco). M. D. George Washington University, 1916. P. D. Philadelphia College of Pharmacy, 1910. Practice limited to Dermatology and Syphilology. Hospital connections: San Francisco Polyclinic and Mary's Help Hospital. Appointments: Clinical Instructor Dermatology and Syphilology, Stanford University Medical School; Clinical Assistant in the Department of Dermatology and Syphilology, College of Physicians and Surgeons, Columbia University, 1923-1924. Captain Medical Corps (Regular Army), 1917-1922.

amperage and voltage of current employed, if we wish to cause desiccation, that is, a dehydration with consequent shrinking of the cells, we use the unipolar, which is known as the Oudin current; when we desire coagulation effects, that is, an actual coagulation of the tissue proteins into a homogenous mass we use the bipolar, which is known as the D'Arsonval current. However, heavy unipolar currents may also cause some coagulation, while mild bipolar currents may cause only desiccation.

There are many machines on the market that will deliver either type of current, the converting principle being the same in all of them. Figure 1 shows the electrical principles of the apparatus. A 110 volt, 60 cycle, unlimited alternating current passes through the primary coil of a transformer, thus inducing a current of much higher voltage in the secondary coil. The condenser and spark gap serve to break up the 60 cycle frequency into thousands, with a corresponding reduction in wave length. The current coming from such a combination is passed through the primary portion of an autotransformer, which may be in the form of an autotransformer which will again increase the voltage; the increase being proportional to the ratio of turns between the primary and secondary portions.

In the unipolar work, on account of there being no return circuit, the ratio must be higher so as to induce a voltage high enough to drive the current into the tissue. In the bipolar work, however, the return circuit is established by means of the indifferent electrode, hence a high voltage is not needed, and the ratio between the turns is much lower and the amperage correspondingly increased.

The greater the frequency the shorter the wave length. This point was made use of by D'Arsonval, who discovered first, that muscular contractions were intolerable with wave lengths of from 1500 to 2000 meters, while with wave lengths of less than 100 meters, as obtained with the oscillating current from an Oudin resonator, no muscular contractions were noted, but heat was produced within the tissues.

This current which now has a frequency of about 1,000,000 oscillations, with the voltage raised to about 15,000 and amperage limited to 2500 milliamperes is transmitted to the tissue to be destroyed by means of a metal point. Usually an ordinary sewing-needle is fastened in an applicator having a rubber handle, and in contradistinction to the actual cautery, which is hot and causes carbonization of the tissues with only superficial penetration, this metal point remains cold, the heat being generated within the tissue to any depth desired. The cell destruction is proportional to the strength and kind of current used. The explanation of heat development within the tissues rests on the fact that the body is a poor conductor of electricity and therefore offers resistance to it; this resistance shows up in the form of heat.

The effects of desiccation and coagulation on the tissues are different, and will be considered separately.

*Desiccation* will thoroughly destroy local skin lesions with a minimum amount of resulting scar

formation; the heat produced is moderate in degree, but of sufficient intensity to cause complete evaporation of the water content of the cells. Figure 3 confirms the histological findings of Clark and Asnis in regard to the effects of electro-desiccation, the cells and nuclei appearing shrunken and elongated.

The comparatively slight trauma to the tissues, the more or less selective action it has on abnormal cells, or rather on cells of lower vitality than nor-

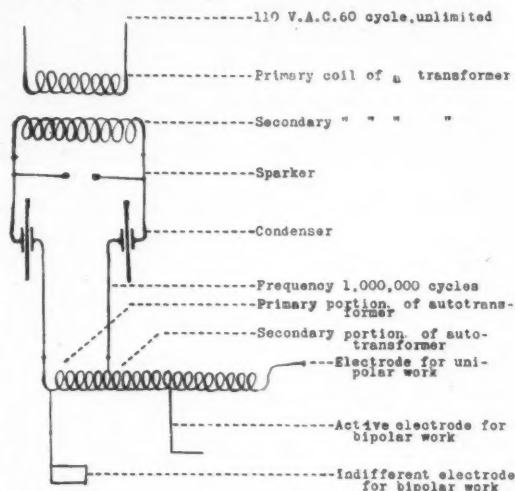


Fig. 1. Electrical principles of the desiccation and coagulation apparatus.

mal cells, and the mild secondary inflammation explain, from a histological point of view, the little scarring that follows this method of destruction. Its effects can be so perfectly controlled that it is possible to successfully remove a patch of chloasma without injuring the underlying tissues, or remove a basal cell epithelioma from the eyelid, for instance, without danger of producing an ectropion, or a large pigmented and verrucous nevus may be removed with good cosmetic results.

Very excellent results are also obtained in benign lesions of the tongue and mucous membrane of the buccal cavity; such lesions as papillomata, lupus erythematosus, glossitis rhombica mediana, can be destroyed rapidly and thoroughly. In two patients with the latter disease, whom I assisted in treating by this means, there was very little discomfort, and the end results were satisfactory.

In leucoplakia, it is the treatment par excellence. The patches are anesthetized by a topical application of a 10 per cent solution of cocaine; then the application of a very fine current will completely destroy the lesion. The devitalized tissue can be separated and stripped off as a membrane with the aid of a pair of forceps. The after effects are not severe, and the patient never experiences the discomfort that usually follows radium applications in the buccal cavity.

A lesion of any size or depth can be removed with one application, but in the benign lesions that cover a large area it is better to destroy a portion at a time. The amperage, voltage, frequency, and time



Fig. 2. Normal skin of guinea-pig, showing group of hair follicles.



Fig. 4. Skin of guinea-pig, showing effects of coagulation; the cell outline is destroyed and the tissue has a hyalinized appearance.



Fig. 3. Skin of guinea-pig, showing effects of desiccation; the cells and nuclei of the epithelium lining the hair follicles are shriveled and elongated.

of exposure must vary according to the depth and density of the tissue treated. This can be gauged only by experience.

When superficial dehydration is desired the metal point is not brought in close contact with the tissue, but an air space varying from 2 mm. to 2 cm. is interposed between them. The current is projected to the tissue in the form of sparks which follow one another with such rapidity that it appears as a luminous glow. A small growth may thus be desiccated through a sheet of white paper without charring or discoloring it.

A dry crust forms at once after the application, and the time required for separation depends on the character of the tissue. Desiccated mucous membrane tissue soon becomes macerated by the secretions and may separate in a few hours, but on the skin surface it takes a longer time. When the skin is soft and vascular there is a more rapid separation than where it is hard and with poor blood supply; thus a soft mole will slough more readily than a callus. Regeneration of the skin or scar tissue often takes place underneath the crust, and in benign lesions where a good cosmetic result is of paramount importance I have found that it is a better procedure to desiccate superficially and not remove the crust mechanically, but allow it to slough away naturally, repeating the treatment at a later date if all of the lesion has not been removed. However, in treating small rodent ulcers, nodules of lupus vulgaris, or a patch of lupus erythematosus where it is more important to completely remove the entire lesion at one time, a curette is used in conjunction with the desiccation, mechanically removing the tissue after it has been destroyed. The base of the lesion is then sealed by superficial desiccation.

Other skin conditions in which this method is applicable, the degree of success depending on the experience and skill of the operator, are plantar warts, xanthoma palpebrarum, keloids, rhinophyma, and tattoo marks.

*Overtreatment is the mistake most of us make at the beginning and must be continually guarded*

*against, as destruction goes beyond its apparent limits.*

Coagulation, on the other hand, causes a more penetrating and more intense heat than that of desiccation, so that, in addition to dehydrating the tissue, it causes coagulation of the cell protoplasm as well; histologically, as Figure 4 shows, there is a complete loss of cell outline, thrombosis of the blood-vessels, and a hyalinized appearance of the tissue.

An indifferent electrode is necessary in this method, and a moistened asbestos pad must be placed in close contact with the patient's skin, the active electrode being of the same type as that used in desiccation, but both the active and indifferent electrodes are connected to either side of the winding. Since the effect of the high frequency current is entirely thermic, it does not matter to which side the active electrode is connected. A milliamperemeter is attached in the circuit and the strength of current used varies from 200 to 2000 milliamperes, depending on the size of the growth to be treated.

This form of therapy is especially indicated in the localized basal and squamous cell epitheliomas of the skin. Its advantages are, that large areas of abnormal tissue can be destroyed rapidly and effectively and with a minimum amount of harm to the surrounding tissue. And in case of recurrence there is no contra-indication to repeating the treatment in a more radical manner. Whereas, in recurrences following massive doses of roentgen ray or radium the basophilic degeneration of the surrounding tissue has resulted in atrophy and further radiations are contra-indicated. The blood and lymph channels are sealed, making the operation bloodless and thereby lessening the likelihood of metastasis.

Coagulation is perhaps the best means we have for removing the highly malignant melanocarcinomas of the skin. I had an opportunity of assisting in thus destroying these cancers in three patients in whom this method of treatment was used alone. None of the patients presented palpable glands, and in two no recurrence nor any detectable metastasis occurred during my observation of one and one-half



years. The other patient, however, while presenting no recurrence at the site of the original lesion, did present constantly recurring pinhead-sized melanotic areas near the site of the original lesion, which were destroyed by desiccation as rapidly as they appeared.

The technique used in the removal of these tumors is applicable to all types of malignant skin lesions, and is as follows: The area is made anesthetic with a 1 or 2 per cent solution of novocain by injecting the skin surrounding the tumor at a distance of at least two inches from its outer margin, care being taken not to enter the needle near the tumor mass. The tissue corresponding to the injected area, as well as the tissue beneath the tumor, is then coagulated so as to cut off the lymph and blood drainage from the part. If desired, tissue can now be removed for microscopical study with safety. The entire tumor is then thoroughly coagulated and removed as a mass of dead debris.

Where small epitheliomas of the mucous membranes such as the tongue and lip are treated before metastasis has occurred, the results are as good as those obtained in localized skin cancers. However, we cannot be sure that the adjacent glands are not involved, even though they may not be palpable, and for that reason the gland areas should receive prophylactic exposures with radium or x-ray.

In patients with far advanced epithelioma of the tongue, lip or skin, where vital structures are involved, and gland metastasis has occurred, surgeons are reporting excellent palliative results from using the coagulation method to destroy the local lesion, making a preliminary ligation of the blood supply of the part, and treating the glands with imbedded radium needles.

I wish to thank Dr. Frank Blaisdell of the Department of Surgical Pathology, Stanford University, for photographing the microscopical sections.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—The section owes its gratitude to Stratton for so ably presenting this subject. Electro-desiccation and electro-coagulation have been made much easier of application by improvements in apparatus, but the cost of their art is still rather high. However, the method has proved its great value, excelling in some of its results the use of radium or x-ray.

Some months ago Stratton very successfully treated a patient for me by electro-coagulation. It was a case of basal cell epithelioma recurring at the border of a scar on the face, due to previous unsuccessful radium treatments. Recently the patient reported for observation, showing a perfectly inconspicuous scar and not the slightest suggestion of a recurrence.

My first experience with diathermy was in Berlin (1912), when I saw a patch of lupus vulgaris on the nose effectively and painlessly destroyed. It is surprising that the method is not more generally employed, for time has demonstrated the permanency of its good results in destroying malignancy, pigmented naevi, leukoplakia, and numerous more or less disfiguring benign lesions of skin and mucous membrane. When skillfully applied the cosmetic results are most satisfactory, and this is of prime importance to the dermatologist.

ERNEST DWIGHT CHIPMAN, M. D. (350 Post Street, San Francisco)—It is certainly gratifying that the discussion of a relatively new method of treatment has been handled so conservatively. There is no question that there exist great opportunities for the application of electro-coagulation

and electro-desiccation. As time passes, doubtless the indications will become more clearly defined in the minds of dermatologists. Even today there is ample room for differences of opinion as to the relative merits of such agents as carbon dioxide snow, the galvano cautery, and the electric needle. Various considerations such as location, the size and the type of the growth, influence us in our choice of the agent to be employed. More time must elapse before the exact status of the newer method can be estimated. In the meantime Stratton has given us a valuable summary which is free from any exaggerated claims and which will not give the profession at large the idea of a wonderful cure-all.

J. CAMERON PICKETT, M. D. (291 Geary Street, San Francisco)—Doctor Stratton's paper on electro-desiccation was of great interest to me, for the reason that I have heard of very little discussion on this method of operation since it was first brought out by Clark about fifteen years ago. At that time I copied an apparatus used by him, and I have used it in my office ever since; this has been very unsatisfactory, as the high current cracks the leaded glass plates very frequently. I was glad to note that Doctor Stratton has found a more suitable apparatus for generating the cold spark.

I have used the electro-desiccation almost exclusively in the removing of warts, keratosis, and beginning squamous cell epithelioma. The desiccating current has a special selectivity to pathological tissue and makes a line of separation from the normal tissue, leaving the pathological tissue desiccated and easily removed. Then, if necessary, radium and x-ray can be used in more advanced forms of epithelioma. This current coagulates the blood and destroys the small capillaries so that the operation is almost bloodless. In a few seconds it will destroy a small capillary nevus on the face, and if properly used will leave no scar.

MOSES SCHOLTZ, M. D. (Brockman Building, Los Angeles)—Stratton has brought to our attention a subject of great clinical importance. Dermatology in general has benefited from electrotherapeutics possibly more than from any other branch of clinical medicine; and diathermy bids fair to prove one of the most promising and efficient electrotherapeutic agencies in dermatologic armamentarium.

I have no personal experience with electro-coagulation, but I do use extensively desiccation with the Oudin current, so-called fulguration. This seemingly technically simple and elementary procedure, in my experience, has proven most useful and covers a surprisingly large field of clinical application. Its clinical advantages are many: First, the very simplicity of technic, so easy that it requires no preliminary experience or training. Second, the rapidity of administration and its instantaneous action to any desired degree. Third, the perfect safety from any injurious effects and complications, if applied with the most ordinary intelligence and care. Fourth, relative painlessness, allowing its use even on sensitive individuals without a local anesthetic. Fifth, its inherent aseptic quality because of the production of a dry scab of heat-coagulated tissue, which prevents the possibility of pyogenic infection and requires no surgical after-care. And last but not least the excellent cosmetic results, as its penetration can be easily controlled to any desired depth, and in the overwhelming majority of cases it leaves no scars whatsoever. Lesions that can be treated by desiccation are many. Here belong all kinds of small benign tumors and formations—warts and papillomata, particularly multiple warts in the bearded region in men, small vascular and pigmented nevi, sebaceous adenomata, seborrheic warts, senile keratoses, and even superficial incipient epitheliomata.

I believe that the use of diathermy will increase steadily, will grow in importance and clinical value, as dermatologists will familiarize themselves with its technic and clinical indications.

HOWARD MORROW, M. D. (334 Post Street, San Francisco)—Electrothermic destruction is a very useful addition to our therapeutic armamentarium in dermatology, particularly in the treatment of benign and malignant growths of the skin and mucous membrane. As is the case with any single method, electrothermic destruction

is not a cure-all, but may often be used to advantage in conjunction with radium, x-ray, surgery, or the curette. In addition to the conditions in which Stratton has indicated its usefulness, I would like to point out its value in the treatment of the radiodermatoses, especially in x-ray keratoses and epitheliomata. These often clear nicely under radium therapy, but the danger of accentuating rather than improving the condition is undoubtedly present, and we have discontinued radium treatment for them. Electro-desiccation or electro-coagulation removes these excrescences thoroughly, leaving a soft, vascular scar in place of the hard, avascular one which excessive radiotherapy causes. The area of destruction for an extensive lesion of this type must often be quite wide and deep, and the resulting ulcer may be painful and slow to heal, but the good result is our justification. It is notable that in extensive growths which are painful, especially those of the mouth, electrothermic destruction, though extensive, frequently relieves the pain at once.

### ANOMALIES, DISEASES, AND INJURIES OF THE SPINE

By JAMES P. KERBY\*

THE large number of variations and anomalies of development of the spinal column makes it difficult in many instances to differentiate the pathological from the anomalous; thus a knowledge of the anomalies and variations in development of the vertebrae is essential. Diagnostic difficulties are increased by certain other factors which, although being departures from normal, can scarcely be classed as pathological. Under this latter class may be mentioned variations associated with age, occupation, and posture.

In any study of the abnormal, we must have a full understanding of normal vertebrae. There may be some little difference in established standards, but with the exception of the fifth lumbar, and possibly the twelfth dorsal and first lumbar, a standard can be evolved, though it may have to be modified in the light of subsequent experience.

A typical vertebra develops from at least three chief primary centers: one for the centrum or body (some authors give two for the body, which fuse into one), the other two for the pedicles, postero-lateral portion of the body, arches, and processes; and five secondary centers from which develop the tip of the spinous process, the transverse processes and a thin plate for the upper and lower surfaces of the bodies.

Variations in numbers include instances of 8 cervical, 12 dorsal and 4 lumbar; 6 cervical, 12 dorsal and 6 lumbar. Variation in the number of dorsal vertebrae is least frequently seen. To determine the

exact number of vertebrae it is necessary to radiograph the entire spine. Despite the variation in the distribution of vertebrae in the different regions, the total number of presacral vertebrae is nearly always twenty-four.

Variation in structure is shown in failure of the posterior arch to fuse—*spina bifida*. This is most likely to occur in the seventh cervical and first dorsal or fourth and fifth lumbar. Faulty structure in the fifth lumbar vertebra is seldom of clinical significance, and is probably an incomplete fusion rather than a failure to fuse. Rudimentary *spina bifida* is frequently accompanied by an anomalous cervical rib or sacralization of transverse process of the fifth lumbar vertebra. In some persons the laminae may fail to fuse; the spinous process forms from one lamina; and an anomaly, simulating an apparent fracture, is observed. Anomalous formation of the spinous process of the sixth and seventh cervical vertebrae, producing an appearance suggestive of a fracture of the tip of the process, has been reported, but so far as I have been able to determine no report of an anomalous formation above the sixth has been noted. Normally the spinous processes of the third, fourth, and fifth are short and bifid; that of the sixth is longer and usually single; that of the seventh is longer, heavier, and single. The spinous processes of the upper dorsal are very much like that of the seventh cervical but a trifle longer and heavier and point lower. Those of the lower dorsal are longer and narrower and point even more toward the sacrum. The spinous processes of the lumbar vertebrae are shorter and point more nearly horizontally. The spinous process of the fifth lumbar is much shorter than those of its fellows and is frequently only rudimentary. Occasionally the tip of the spinous process seems to be connected with the rest of the process by cartilage. Long transverse processes on the seventh cervical vertebra may simulate a cervical rib. The transverse processes of the third and fifth lumbar vertebrae are longer than the others. Those of the fourth are shorter and lighter. One of the commoner anomalies is the change known as sacralization of the fifth lumbar vertebra—an anatomical variation in which the transverse process of the fifth lumbar vertebra attempts to take on the character of the first piece of the sacrum. Instead of being a perfectly straight process, it is expanded and bulbous, extending down to and touching the top of the sacrum and sometimes the posterior portion of the ilium, occasionally forming a false joint; oftener unilateral. An analogous condition, though less likely to produce symptoms, is noted in the top of the sacrum, which sometimes assumes the contour of the last lumbar vertebra, and develops a piece at its upper border simulating a free transverse process.

Occasionally a congenital fusion of bodies is seen. There may be an arrest in development, causing the bodies to be only one-half the usual height. These last two conditions are seen almost invariably in the lumbar vertebrae. Occasionally a rudimentary supernumerary vertebra, nearly always wedge-shaped, is observed. Occasionally the first lumbar vertebra has transverse processes so long as to simu-

\* James P. Kerby (325 Boston Building, Salt Lake City). M. D. George Washington University, 1910. Graduate Study: Central Dispensary and Emergency Hospital, Washington, D. C., 1911-12; Children's Hospital, Washington, 1913; Chicago P. G. Medical School, 1916; School of Military Roentgenology, Johns Hopkins Hospital, 1917-18; New York P. G. Medical School, 1920. Previous Honors: U. S. Reclamation Service, Medical Dept., 1913-15; Medical Dept., U. S. Army, 1917-19. Present Hospital Connections: Roentgenologist to Holy Cross Hospital; St. Mark's Hospital; Salt Lake County Hospital; L. D. S. Children's Hospital; U. S. V. B. Regional Office. Present Scientific Organizations: Salt Lake County Medical Society; Utah State Medical Association; A. M. A.; American Roentgen Ray Society. Present Appointments: Major, M. O. R. C. Practice limited to X-Ray Diagnosis and Treatment since 1918. Publications: "Deep X-Ray Therapy," *California and Western Medicine*, May, 1924; "The Roentgenologist as a Staff Consultant," *Hospital Progress*, January, 1926.



late ribs. To differentiate it is necessary to picture the entire spine. Rarely, the tip of the transverse process may fail to fuse, with a resultant pseudoarthrosis simulating a fracture. A slightly anomalous development of a transverse process, associated with a well-defined psoas muscle, often suggests possibility of a fracture. A unilateral supernumerary rib may cause marked deformity of outline of the vertebrae.

Incident to middle and old age there are certain changes occurring in the vertebral column, which are as much to be expected as alterations in the blood pressure. These changes while probably, to a large degree at least, physiological, and, so to speak, environmental, complicate the problem of exact diagnosis. Examination of the spines of one hundred individuals who lead sedentary lives as compared with those of one hundred who lead lives of activity and muscular exertion, I believe, will show essentially the same type of changes in individuals of the same class, but there will be a definite difference between the findings in the two classes. For instance, there is less evidence of roughening and haziness of the interarticular spaces in the "leisure" class, while those who earn their bread by manual labor, in a large percentage of individuals between the ages of 40 and 60, will show some haziness of the interspaces, slight to moderate elevation of the periosteum at the margin of the articulating surfaces, with possibly a tendency to bridging of the intervertebral spaces. At 35 there is practically no lipping. Between 35 and 40 it is first noted and is most marked in individuals of the heavy, stocky type, infrequently in those of the slender build. After 45, practically all individuals of the stocky type show signs in varying degree of hypertrophic changes. At 50 a very large percentage of individuals of medium build show these changes. At 55 only a small percentage of even the slender type escape the changes noted. What the significance of these changes is, remains to be determined. Chemical, infectious and traumatic disturbances have been offered in explanation. Whatever the full significance, the fact is well established that an arthritis occurring in individuals with this, if I may use the term, "diathesis," is particularly resistant to usual treatment. It is thus clear that a distinction between what might be termed physiological changes and pathological changes may be difficult. A large percentage of individuals in whom changes of this sort may be noted give no history of pain or discomfort until trauma is received.

Arthritis of the spine is too large a subject to fully discuss here; too often we look for evidence of an arthritis between the bodies, forgetting that we really have two series of vertebral articulations: those between the bodies and those between the articular facets. It is the latter that we so frequently miss until the process has been of long duration (incidentally, they are the most difficult to demonstrate with the x-ray).

A common cause of arthritis is tuberculosis. In the early stages it is confined to the articular surface and the intervertebral spaces. Later the discs are destroyed and there occurs bone destruction,

compression and approximation of the bodies (nearly always the anterior portion), producing the characteristic kyphosis. There is no bone production. It is most frequent in young children and adults.

Infectious arthritis, which shows no characteristic x-ray findings, may follow almost any bacterial invasion, e. g., gonococci, spirocheta, pneumococci, and typhoid bacilli. It may occur at any age. I have recently seen a patient with infectious arthritis who showed marked relief after removal of tonsils harboring the organism of Vincent's angina. Infection usually produces a bony overgrowth manifested by a varying degree of elevation of the articular margin, often referred to as "lipping," without angulation or deformity.

A generalized atrophic change of unknown significance, involving the bodies and articulating surfaces, may be encountered.

The Marie-Strumpel type of arthritis is a spondylitis deformans of a progressive type, commencing in the lumbar region, slowly extending upward to the atlas, often involving the shoulders and hips. There is a progressive calcification, and ankylosis of the ligaments and cartilages is occasionally seen.

The role of trauma is a moot question. Some maintain there is not a pure traumatic arthritis, that the trauma merely serves to produce a locus minoris resistencie for bacterial invasion. It is my opinion that there is a definite relation of cause and effect between trauma and subsequent arthritis in many patients, and this inflammation will frequently be found between the articular facets rather than between the bodies of the vertebrae. This condition may be difficult or impossible of diagnosis. Comparison of findings immediately after injury and at a subsequent date is often illuminating. Usually the traumatic and infectious cannot be differentiated unless there is evidence of periosteal trauma.

Charcot joint and syringomyelia produce very similar painless destructive changes in the vertebrae. Syringomyelia usually involves the cervical and upper dorsal; Charcot, the lower dorsal and lumbar spine. In these conditions there is a tremendous destruction of bone, angulation, obliteration of intervertebral discs and bony detritus.

Actinomycosis and blastomycosis have been described as producing changes in the joint surfaces. These are not characteristic and are similar to the changes produced by other forms of infectious arthritis.

Secondary carcinoma is the most common neoplasm involving the spine. Round and spindle cell sarcoma, osteosarcoma, giant cell sarcoma, and osteoma follow in the order named. Tumors involve the bodies only; do not destroy interarticular artilage; produce no angulation; and deformity is very late, often not appearing until there is very little more than a shell of bone remaining. Enchondroma and cyst are very rare.

Fracture of the spine may involve the body or the neural arch, i. e., laminae, pedicles and articulating tubercles, or both. Fracture of the body may vary in degree; and may have added to it a partial or complete dislocation. The fracture may be a compression, narrowing from above downward; or

a comminution, with disorganization of the body fragments. I doubt if it is possible to have a dislocation without a fracture, at least of some part of the neural arch. Fractures are rare in children. They occur most commonly between 20 and 40, and much oftener in males. Most statistics place them most commonly between the sixth cervical and second lumbar. In my experience, they occur oftenest between the first and fourth lumbar vertebrae. Cervical fractures have the highest mortality. Fracture of the spinous process is seen oftenest in the cervical region. In simple compression fracture there is often very little neurological symptomatology. Complete recovery is usual. Usually the break in continuity is apparent, but in many patients a slight narrowing from above downward or a very slight "wedging" of outline is the only evidence. Occasionally this is not apparent until examination several weeks after injury.

In patients with comminution the neural arch is usually involved, followed by cord pressure. Convalescence is prolonged, and there is liability for some permanent motor paralysis. However, a fracture of the neural arch may occur, with marked comminution of the body of a vertebra, with no cord symptoms.

The character and permanence of cord symptoms depend upon the amount of pressure on and injury to the meninges and cord substance, and how soon relieved.

Although cord symptoms may entirely disappear, it is probable that x-ray evidence of injury to the bodies, except where very slight, will always be demonstrable.

Fractures of the transverse processes of the lumbar vertebrae are due oftener to indirect violence or muscular action than to direct violence. Many compression fractures of the lower dorsal and upper lumbar vertebrae are due to indirect violence.

Sacro-iliac dislocations are very rare, and I believe, without exception, follow severe direct trauma. There are, of course, lateral separations at the sacro-iliac articulation analogous to separation at the symphysis. The so-called sacro-iliac subluxation is probably due to disturbance of ligaments, and gives no x-ray evidence of its existence.

A condition known as Kümmel's disease is occasionally encountered. This is a condition in which a progressive change occurs in the bodies. Instead of being quadrilateral, they become wedge-shaped. Many of these cases follow trauma, and the condition has been called by some "railway spine," though this latter is usually more aptly applied to a litigation spine. The etiology is not certain, and definite connection with injury as the direct cause has not been made.

Spondylolisthesis is occasionally met; practically always due to a congenital defect, although some are said to be due to trauma. The influence of some factor arising in early childhood has also been suggested as playing a causative role. A stereoscopic examination of the region will usually show the forward displacement, but a lateral view demonstrates it definitely.

Incomplete radiological examination of the spine

is deplorable because it may give a false sense of security. I believe that in fractures certainly, and otherwise when the vertebral body is involved, an anteroposterior stereoscopic examination is necessary, as is also a lateral, and sometimes an oblique. In many patients repeated thorough examination is necessary.

It is realized that every condition seen in the spine has not been described and that many conditions have not been described in detail. I hope, however, that enough has been said to emphasize the difficulty of intelligent interpretation and in some patients the impossibility of diagnosis without correlating of radiological and clinical findings.

This paper is presented in the hope that it will stimulate more careful consideration of backaches and injuries, and the firm belief that many vague and obscure cases will be successfully diagnosed.

### THE PRESENT STATUS OF BISMUTH IN ANTI-SYPHILITIC TREATMENT

By SAMUEL AYRES, JR.\*

*Various salts of bismuth have been found by numerous investigators to possess marked spirocheticidal properties in animals experimentally inoculated with syphilis and in clinical human syphilis in all stages.*

*Symptomatic and serologic improvement compares favorably with the arsphenamines, is superior to mercury, and in many latent Wassermann-fast cases is better than that produced by any other form of anti-syphilitic treatment.*

*Bismuth salts, when injected intramuscularly in proper dosage, produce few toxic effects.*

*Bismuth should always be employed in patients who are intolerant to arsenic or mercury. A rapidly growing accumulation of data justifies its routine use in conjunction with the arsphenamines and mercury.*

*Discussion by Harry E. Alderson, San Francisco; Irvin C. Sutton, Hollywood; George D. Culver, San Francisco.*

ALTHOUGH bismuth has been employed in the treatment of syphilis less than five years, an extensive literature has accumulated concerning it. All who have studied its action attest its value.

This paper attempts to present briefly the most recent developments in bismuth therapy from a practical point of view.

This may best be done under seven headings: (1) As a spirocheticide; (2) effect on the clinical course of the disease; (3) effect on the Wassermann reaction; (4) effect on body resistance; (5) toxic effects; (6) its relation to arsenic and mercury; (7) administration.

#### (1) BISMUTH AS A SPIROCHETICIDE

Klauder has shown that in experimental rabbit syphilis an ample margin of safety exists between the therapeutically effective dose and the maximum tolerated dose when the drug is injected intramuscularly. The dark field became negative forty-eight

\* Samuel Ayres, Jr. (2007 Wilshire Boulevard, Los Angeles). M. D. Harvard University. Practice limited to Dermatology and Syphilology. Hospital connections: Good Samaritan, California-Lutheran, White Memorial, Children's, Los Angeles General and Hollywood Hospitals. Appointments: Clinical Professor of Dermatology, College of Medical Evangelists, Los Angeles; Member Board of Directors, Council on International Relations. Publications: "Glucose Tolerance Reactions in Eczema" (Arch. Derm. and Syph., May, 1925); "Chronic Actinic Cheilitis" (Journal A. M. A., October 6, 1923).

hours after the therapeutic dose and the chancre involuted within about eight days. Klauder employed sodium and potassium tartrobismuthate in aqueous solution and in oil, and bismuth trioxide in oil.

Levaditi and Sazerac found that in rabbits infected with human syphilis, 400 mg. per kilogram of body weight of sodium and potassium tartrobismuthate injected intramuscularly was well tolerated. They found that one-fourth of this amount caused a disappearance of spirochetes from the chancre in twenty-four hours, followed by healing of the lesions on the second to the fourth day. In one animal observed for four months there was no relapse.

In nine cases of chancre observed by Pasini the dark field became negative within twenty-four to forty-eight hours after one injection of sodium and potassium tartrobismuthate.

## (2) EFFECT OF BISMUTH ON THE CLINICAL COURSE OF THE DISEASE

**Primary Phase**—According to Fournier and Guénot, chancres were as rapidly improved by bismuth as by any other form of treatment and disappeared in a few weeks. Hopkins reports a case of chancre of one week's duration showing positive dark field and strongly positive Wassermann, which was completely healed in four weeks as the result of six injections of sodium and potassium tartrobismuthate given in 0.200 and 0.100 doses. He reports another case of a lip chancre of five weeks' duration with a secondary rash, which was also healed within a month under similar treatment. Klauder records a lip chancre with positive dark field and positive Wassermann in which the dark field became negative twenty-four hours after one intramuscular injection of 0.1 gm. of sodium and potassium tartrobismuthate in aqueous solution. The chancre had entirely healed after nine injections given within three weeks. McCafferty found that in three cases of early primary syphilis spirochetes disappeared from the chancres in about six to nine days after the first injection of bismuth and that inguinal adenopathy disappeared from the thirteenth to the sixteenth day.

**Secondary Phase**—Hopkins cites three cases of secondary syphilis, a maculo-papular of two weeks' duration, a papulo-pustular (varioliform) of three weeks' duration, and a papular (corymbiform) of one week's duration, in all of which the rash had entirely disappeared within three to four weeks as the result of two to eight injections intramuscularly of sodium and potassium tartrobismuthate, each dose ranging from 0.100 to 0.200 given at intervals of from two to seven days. According to Fournier and Guénot, secondary skin and mucous membrane lesions healed as rapidly as with the arsenicals. Klauder reports a case of macular syphilis of one month's duration, in which the eruption had completely disappeared after three weeks of treatment with sodium and potassium tartrobismuthate given three times a week in 0.100 and 0.200 doses. Schwartz and Levin report that "in secondary syphilis bismuth therapy causes the disappearance of the local and general manifestations and

reduces the Wassermann reaction. It does these more quickly and efficiently than mercury, and there is less possibility of the development of a Herxheimer reaction or a neurorecidive than when arsenotherapy is employed. It has been used in the presence of jaundice, caused either by the disease or by arsenic, with success and without producing harm."

**Tertiary Phase**—Shivers concludes, from a study of fifty-seven patients, that bismuth is effective clinically in all forms of tertiary syphilis. He believes that it is superior to arsenic in some cases of neurosyphilis.

Fournier and Guénot found that the cutaneous and periosteal lesions of late syphilis healed promptly and satisfactorily under bismuth treatment. Grund reported marked symptomatic improvement in one case of cardio-vascular syphilis, with slight dyspnea and pre-cordial pain. Marie and Fourcade have found prompt and definite improvement in central nervous syphilis involving vascular and nerve-root lesions and gumma, but no serologic or symptomatic improvement in advanced general paresis.

Ahlswede and Busch, after using the oxybenzoic acid compound of bismuth, conclude that "bismuth compounds promise most in the treatment of cerebral syphilis and tabes." Similarly, Mueller found quantities of bismuth in the spinal fluid, a decrease of the pleocytosis and clinical improvement in patients with syphilis of the central nervous system.

## (3) EFFECT ON THE WASSERMANN REACTION

The consensus of opinion of most investigators is to the effect that bismuth renders positive Wassermann reactions promptly negative in primary and secondary syphilis, and exerts a vigorous effect even in late syphilis. Grund, for example, showed that 33 per cent of a series of seventy-five cases of Wassermann-fast syphilis, all of whom had been treated with arsphenamine and mercury from one to seven years, became negative after fifteen injections of sodium and potassium tartrobismuthate in 0.200 doses; 60 per cent, however, were unaffected. Shivers reports a series of sixty cases in all but three of which the disease was chronic, in which 26.6 per cent gave negative Wassermann reactions after a total of 4.00 of potassium bismuth tartrate. All but one showed a reduction of the Kolmer quantitative complement-fixation test after a total of 2.00. Levaditi reports a prompt favorable action in primary and secondary syphilis in a large series of cases. Hopkins, in summarizing the effect of bismuth on the Wassermann reaction in a series of forty-three latent cases, found no improvement in 12; slight improvement in 7; marked improvement in 9; marked improvement with relapse in 10; change to negative in 5 (of which 4 were weakly positive before treatment). The number of injections varied from four to twenty-eight.

## (4) EFFECT ON BODY RESISTANCE

Klauder believes that "another possible advantage of bismuth in the treatment of syphilis which is of considerable importance, although based on theoretical considerations, concerns the occurrence



of neurorecidive following the use of arsphenamine." He cites the observation that irregular or lapsing treatment with arsphenamine seems to increase the incidence of neurosyphilis, due probably to the powerful spirocheticidal action of arsphenamine in destroying most of the organisms in the general circulation, leaving unharmed small foci in the central nervous system where the arsphenamine does not so easily penetrate. This leaves the body without a properly developed immunologic resistance, and consequently the foci of spirochetes in the central nervous system may proliferate unopposed. He feels that bismuth, because of less energetic spirocheticidal action than arsphenamine, and possibly by virtue of intramuscular administration, does not in all probability inhibit immunologic reactions of the host to such an extent as it is believed that arsphenamine does. One would therefore expect, he says, a lessened incidence of early neurosyphilis following irregular and lapsing treatment with bismuth.

Many of Hopkins' patients gained weight and improved in general nutrition under bismuth treatment.

#### (5) TOXIC EFFECTS

Of fifty patients treated by Hopkins only two developed a stomatitis, which subsided promptly on interruption of the injections; one patient showed a swelling of the buttock, from which a clear mucoid fluid was obtained, similar to a reaction reported by Fournier and Guénot. All authors warn against stomatitis, which, however, is not likely to appear unless the mouth hygiene is neglected or the treatment too vigorous. A grayish-brown or bluish-black deposit along the edges of the gums is a danger signal and calls for a reduction or temporary suspension of treatment. A severe stomatitis may be combated by intravenous administration of sodium thiosulphate, as in arsenic or mercury poisoning. In 1507 intramuscular injections of bismuth salicylate to 103 patients, the dose ranging from 2 to 3 grains every three to four days for ten to twelve injections, Ballenger and Elder report that occasional instances of polyuria or mild albuminuria were noted, but in no patients were the kidneys sufficiently affected to necessitate discontinuance of treatment. Severe nephritis has been reported, however, by several observers. If preliminary renal function tests were made, and if the urine were examined frequently during treatment, serious damage could no doubt be avoided. Ballenger and Elder also mention several instances of exanthematous reactions and an occasional tendency for some patients to lose appetite and weight. Very few references to cutaneous reactions, however, are recorded in the literature. Pain at the site of injection was a frequent occurrence when bismuth was first introduced, but recent improvements in the manufacture of various bismuth preparations have practically eliminated this drawback. Milian and Ducrey have reported symptoms of enteritis in a few cases.

#### (6) THE RELATION OF BISMUTH TO ARSENIC AND MERCURY

Most investigators assign to bismuth an interme-

diate position between arsenic and mercury in spirocheticidal properties. Majority opinion is conservative in advocating the use of bismuth as an addition to the older well-proven drugs in current use, rather than as a substitute. It is possible, however, that as data accumulate it may replace other remedies. In many instances where bismuth has been used alone clinical and serological results have been equal to those of arsenic and superior to those of mercury in practically all stages of the disease and in many instances, especially in Wassermann-fast cases, bismuth has been superior to either of the other drugs. Only the future can determine the final position of bismuth preparations among anti-syphilitic remedies.

Levaditi, one of the pioneers in bismuth therapy, is optimistic concerning its future. He says: "Although bismuth has been only recently employed, I have every reason to believe that when used early and in sufficient quantity it will cure syphilis. The absence of recurrences of the disease and the effect on the Wassermann reaction only serve to confirm the opinion. Equal from a therapeutic point of view to arsenical preparations, better than mercurial preparations, bismuth (trepol and neotrepol) is a valuable anti-syphilitic remedy, particularly in those manifestations of the disease which resist the action of arsenic and mercury.

#### (7) ADMINISTRATION OF BISMUTH

In most of the pioneer work on bismuth therapy potassium and sodium tartrobismuthate was employed, therefore this bismuth salt is mentioned most frequently in the literature. However, numerous other salts of bismuth have recently been subjected to clinical use, and the results seem uniformly good. Bismuth salicylate, the oxybenzoic acid compound of bismuth, quinine bismuth iodide, bismuth trioxide, bismuth citrate, potassium bismuthate, sodium bismuthate and metallic bismuth, suspended in sterile isotonic salt solution, are the preparations which have been most frequently used. It is rather difficult at present to appraise their relative merits, good results having been obtained with all of them, different investigators favoring various preparations. Levaditi, one of the first to introduce bismuth as an anti-syphilitic agent, favors metallic bismuth in suspension in a sterile isotonic solution, a preparation containing 95 per cent of metallic bismuth. It is well tolerated and has active therapeutic powers. It is administered intramuscularly in doses of 1.5 to 2 cc. every three or four days for ten to twelve injections. Intravenous administration of bismuth has been found to be too toxic, and consequently practically all preparations are given intramuscularly. Courses of bismuth may be alternated with courses of arsenicals, but an interval of several months should elapse between a course of bismuth and a course of mercury.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—During the few years that we have used bismuth at the Stanford University skin and syphilis clinic we have given over three thousand injections of the same. We are satisfied that it is efficacious and feel that it stands between arsphenamine and mercury in usefulness.

We have had no untoward effects from its use, barring an occasional stomatitis. Sometimes the blue line appears on the gums, without there being much irritation. Of course, we look after hygienic care of the mouth and watch the patient's kidneys. We have found sodium thio-sulphate very efficient in clearing up bismuth stomatitis. In one case recently, the effect was very prompt, the condition subsiding almost over night. We give bismuth in early and in late lues. Some of our patients receive courses of arsphenamine and bismuth concurrently. They stand the combination well, but of course we are only trying this out with carefully selected cases.

In our experience the early, active lesions do not respond as promptly to bismuth injections as they do to arsphenamine. However, bismuth is very effective, more so, in my opinion, than mercury. We frequently see late syphilides disappear rapidly. One recent case presenting large nodular syphilides on the lip showed complete disappearance of the lesions within two weeks, during which time no medication but bismuth was administered.

Our persistent Wassermann cases having no discoverable active lesions have caused us much worry. Some of these we have seen become negative after a course or two of bismuth. We are wondering, however, how soon they will be positive again. It will take years, of course, to determine the real value of bismuth, just as it took some time to find out that one injection of salvarsan would not cure syphilis. So satisfactory has been our extensive experience with bismuth that we are beginning to feel that, along with arsphenamine, mercury and the iodides, it is at present one of our indispensable anti-syphilitic drugs. The Section is indebted to Ayres for presenting so well this important subject for discussion.

IRWIN C. SUTTON, M. D. (Taft Building, Hollywood, California).—Bismuth seems to resemble mercury, in that Herxheimer reactions are few and that neurorecidives are rare with its use in the treatment of syphilis.

It is of the greatest value when a patient becomes sensitive to the arsphenamines and yet must continue to be treated. Doctor Ayres has stressed the importance of kidney study. Severe stomatitis occurs ordinarily only when renal function is impaired and relatively large amounts of bismuth are excreted by the salivary glands.

Although the American practitioner has not yet embraced this new drug with the enthusiasm exhibited abroad, I would like to call attention to the fact that the American products of bismuth have been more highly standardized, less painful on injection, and as efficient as the gaudy foreign preparations.

GEORGE D. CULVER, M. D. (323 Geary Street, San Francisco).—Doctor Ayres has creditably reviewed the subject of bismuth therapy in syphilis. Any exaggerated claims for the superiority of the drug over the arsenicals and mercury would be as yet premature. Syphilis as a disease presents so many vagaries in its manifestations, in its reaction to individual resistance as well as to medication, and in the difficulties of positive proofs of a cure, that only a vast amount of carefully controlled and comparative therapy can permanently standardize any drug for use against this disease.

The disease lends itself so delightfully to the known methods of treatment that one doesn't wonder at the overenthusiasm possible with any addition to the excellent remedies at our command. A warning is always in order not to treat too vigorously, but to treat for a sufficient length of time. Often a more careful consideration of the individual patient will make it possible to secure a satisfactory end-result even when failure has preceded, and with the same anti-syphilitic drugs already used.

Bismuth has its place, but not in supplanting the proven anti-syphilitics. With the doctor who is treating only the occasional case of syphilis, it would still seem that the patient's greatest benefit can be secured through the arsenicals and mercury.

DOCTOR AYRES (closing).—A true appraisal of the value of bismuth in the treatment of syphilis will come only with time and experience.

Data already available, based upon the observations of many competent syphilologists in thousands of cases, should remove any fears in justifying its further use. Its use should be encouraged and the results reported.

## TREATMENT OF ENLARGEMENT OF THE PROSTATE AND THE RESULTS OBTAINED BY MODIFICATION OF YOUNG'S PERINEAL PROSTATECTOMY.

By FRANK HINMAN \*

(From the Department of Urology, University of California, San Francisco)

*There is probably no operation that gives more satisfactory results than a successful prostatectomy, and, of course, it would be unreasonable for physicians to expect 100 per cent of cures in patients who often have pronounced secondary complications, such as chronic infections of the urinary tract or back pressure changes in the bladder such as large diverticula, which, of course, in themselves produce urinary disturbances and continue to give symptoms after even the most successful surgical removal.*

DISCUSSION by Granville MacGowan, Los Angeles; Verne C. Hunt, Rochester, Minnesota.

WHEN a patient with a supposedly enlarged prostate consults a physician, the question at once arises as to whether this patient should have any treatment or very simple palliative medicines and, if treatment, whether this should be surgical or the use of a catheter. These are questions that the physician should answer for the patient and not leave the decision to one who knows little about the facts, and yet, as a matter of fact, many physicians are unfamiliar with the type of conditions which would indicate the advisability of instituting treatment of any kind and are uncertain in their own minds as to what kind of treatment even then should be instituted. The purpose of this communication is briefly to present the conditions, a knowledge of which will usually definitely decide what advice the patient should be given by his physician.

There are two sets of conditions which help in answering the first question as to whether the patient should have any treatment or be left alone. First, the symptomatology or complaint of the patient and, second, the conditions as found on examination. In the first set are the symptoms of frequency and urgency of urination, a complaint which often leads the patient himself to demand relief. Any man who has to empty his bladder as frequently as every half to one hour both day and night is quickly worn out and is anxious for any kind of relief. Where the frequency is a matter of every three to four hours and the patient only has to arise from one to three times at night, this symptom then is not an urgent one with respect to the institution of treatment. The next commonest complaint is one of difficulty, the patient taking longer to empty the bladder and often complaining of the stream being interrupted and usually in these cases of dribbling of urination at the end. This symptom may not be accompanied with marked frequency, and delay in seeking relief is more common with it on this account, but soon the dribbling may increase to a type of paradoxical incontinence demanding the use of a urinal, which is so disagree-

\* Frank Hinman (380 Post Street, San Francisco). M. D. Johns Hopkins Medical School. Practice limited to Urology. Hospital connections: University of California Hospital, San Francisco Hospital. Appointments: Clinical Professor of Urology, University of California Medical School; Urologist, University of California Hospital; Consulting Urologist, San Francisco Hospital.

able as to then lead the patient to seek relief. Usually the above two symptoms are progressive in nature, although they may show periods of exacerbation with temporary relief afterward. Men with moderately enlarged prostates may also have temporary attacks of bleeding and of complete retention, symptoms which in themselves may not demand prolonged or active treatment, but be purely temporary in character. It is, however, not possible to give the patient a decided opinion as to proper management from symptoms alone, but it is only by correlation of the severity of symptoms with the conditions revealed by examination that a just opinion can be based.

The findings of examination of particular importance in deciding whether it is safe to leave the patient alone or to decide for him between operation and catheter life are briefly as follows: Leaving out of consideration all questions of carcinomatous degeneration of the prostate, the type of enlargement and the resultant degree of obstruction is the first point to determine. Not infrequently, large glandular hyperplasias are associated with considerable infection and a course of systematic massage, with bladder irrigations, materially reduces the amount of residual urine with a consequent benefit symptomatically, and a delay in the necessity of direct intervention. The almost opposite type of small fibrous hyperplasias, often associated with small residuals but more marked symptomatic effects, particularly with respect to frequency and urgency, are also associated often with infection and similarly benefited by massage and irrigation. In the ordinary case little benefit results from massage, and more frequently the effect is the opposite in an increase of symptoms and difficulty from a resultant congestion after massage. The only type of case benefited by massage, and this benefit is purely temporary, are those with pronounced infection in association. As a rule, the type of enlargement, other than large glandular or small fibrous, is determined only after cystoscopic examination, and this is of help more with respect to surgical intervention than as a guide to a decision for or against surgery. In all of these cases in which cystoscopic study seems advisable, the patient should be so situated that he may be carefully watched and followed afterwards, because any instrumental examination in these cases is apt to be followed by an increase of symptoms or even complete retention, particularly if large residual is present. But, in spite of this, the most

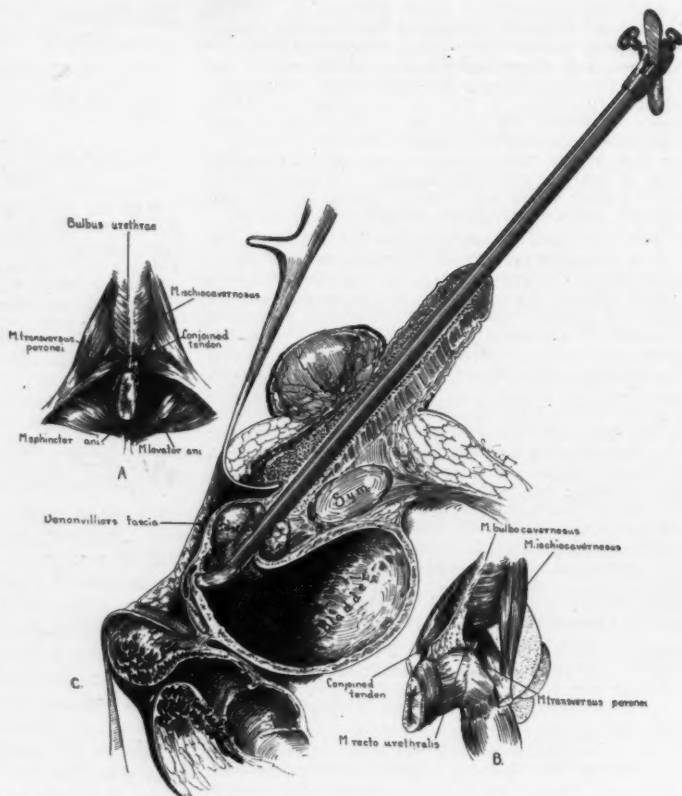


Fig. 1. Diagrammatic representation of tractor in the bladder, for the purpose of lifting the prostate into the perineal field so that its posterior surface may be exposed often without the necessity of dividing the recto-urethralis muscle completely. A shows the fossa to either side of the rectum between the levator ani and the transversus perinei muscles, and B shows the relationship of the bulb to the rectum, with the conjoined tendon and recto-urethralis muscle between. After division of the conjoined tendon, the posterior prostatic surface can often be well exposed without dividing the recto-urethralis.

help to a decision comes from knowledge of the degree of inability of the bladder to empty itself, and the amount of residual urine present in the bladder is the best guide as to the necessity of treatment. There are cases with pronounced symptoms who show small residuals, whereas those with large residuals may show few symptoms that are of particular inconvenience to the patient himself, such as marked nocturia, and, other things being fair, it is safe for a patient with a small residual to delay in treatment. Since residual is the objective evidence of back pressure, a knowledge of the effect of this back pressure upon kidney function is necessary in connection with it in order to give its full value as a guide to a decision in the interests of the patient. A patient with small residual and a normal renal function, as evidenced by a normal phenolsulphonephthalein output or normal amount of non-protein nitrogen or urea nitrogen in the blood, is then one in whom delay can be allowed so long as he is willing to put up with the symptomatic inconveniences of his condition. But the patient, irrespective of residual, whose kidney function is beginning to be impaired by reason of back pressure is one to whom delay is quite detrimental. It is seen that there is no definite figure in the amount of



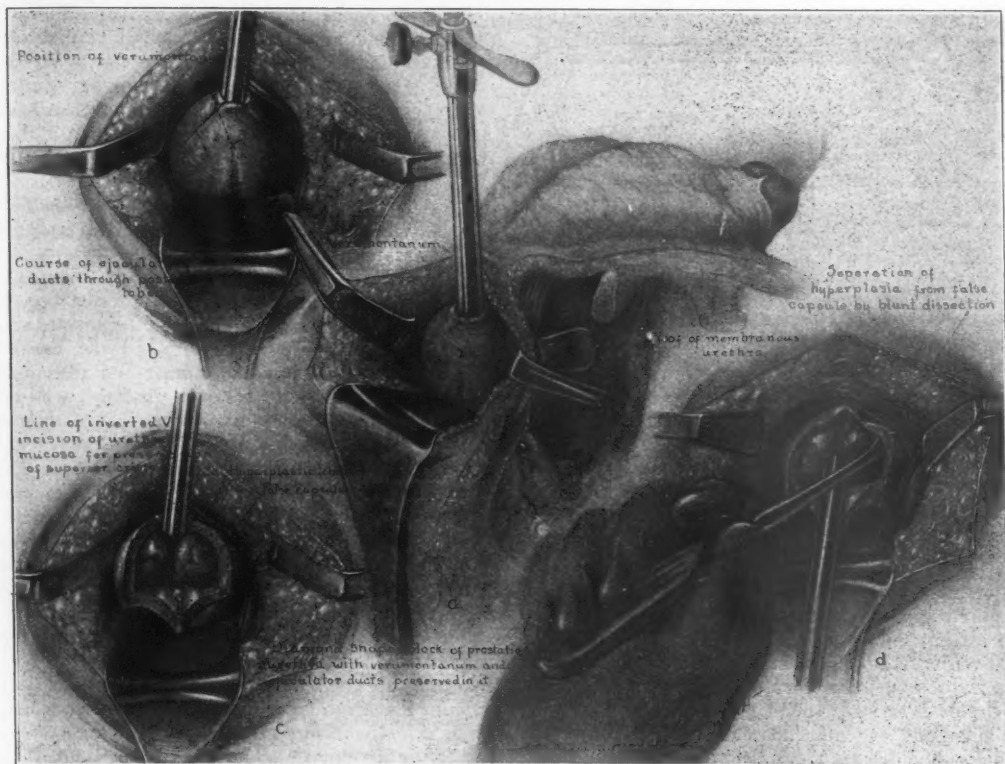


Fig. 2. Shows the method of enucleation so that the prostate can be radically removed en masse if desired.

residual which can be taken as an indication of a stage beyond which the patient should not be allowed to go without treatment, but it is consideration of the symptomatic disturbances in connection with the back pressure disturbances that gives the physician a definite basis for sound advice to his patient. There is, unfortunately, a general tendency by the general profession to procrastinate in these cases, and this would seem due to their unfamiliarity with the injury of such delay to the patient, as well as with the effects and results of treatment. This want of decision is, no doubt, largely due to the bad impression of older methods which modern results have as yet failed to remove, and even when the general profession, after an unwarranted delay, decide that the patient demands treatment, he is prone to advise a catheter life in preference to the risk of surgery when he would not hesitate to subject the patient to a gall-bladder or appendix operation, on the proper indication, either of which have a greater surgical risk. The discrepancy is due to the fact that the surgical mortality of prostatectomy used to be around 20 per cent and the profession has not yet awakened to the fact that, in spite of the age and general physical debility of these cases, prostatectomy has become one of the most benign of operations with a mortality well under 5 per cent.

The other reason for procrastination is the lack of confidence of the general profession in the results obtained by operation should the patient survive;

and, of course, the patient himself first asks both questions, namely, what is the risk and what is the assurance of being cured if I survive? There is probably no operation that gives more satisfactory results than a successful prostatectomy and, of course, it would be unreasonable for the physician to expect 100 per cent of cures in patients who often have pronounced secondary complications, such as chronic infections of the urinary tract or back pressure changes in the bladder such as large diverticula, which, of course, in themselves produce urinary disturbances and continue to give symptoms after even the most successful surgical removal. Great benefit results even in these cases by cutting off further progression of the back pressure changes.

From the beginning the writer has kept careful records and has attempted to accurately follow the results in all cases by follow-up questionnaires in order to know the exact results obtained. In the early period both the suprapubic and perineal routes were used, but it soon became evident that much better results followed the perineal, irrespective of the type of case, particularly in view of the fact that the perineal was by far the safer surgical risk. With experience in the perineal method, it early became manifest that, of its technical difficulties, perfect preservation of the external sphincter and complete radical removal of the enlargement were the two most important. Greater experience soon showed that certain modifications helped to make these two difficulties more fool-proof, and an analy-

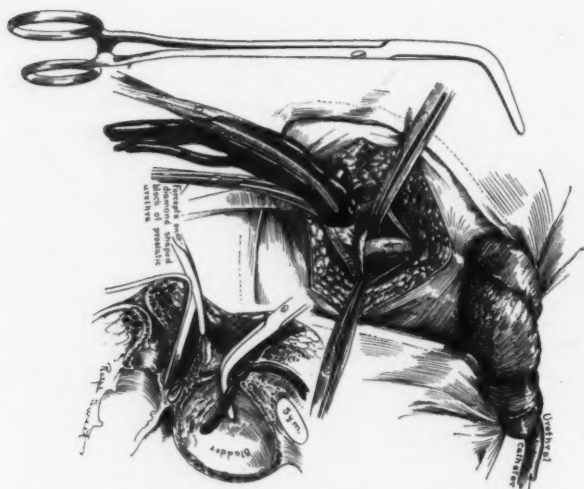


Fig. 3. Shows the method of hemostasis now used with the Davis modification of the Hagner bag, and its method of insertion.

sis of more recent cases in which this modification has been applied, in comparison with the results of the earlier series without it, justifies its use. This analysis will be given in collaboration with Dr. Clark Johnson in another place in which all cases of the department, including those done by men in training, and in consequence their first prostatectomies will also be analyzed. If personal cases alone are considered, the mortality rate is between 2 and 3 per cent, and of the cases which have survived there has been a cure of the urinary disturbance in approximately 95 per cent. There has been no case of persistent recto-urethral fistula and no case of incontinence as a result of the operation.

The time of closure of the perineal fistula after operation has been considerably shortened by the use for a number of days after the operation of a retained catheter, to which a Connell suction apparatus is attached so as to promote catheter drainage and to keep the perineum dry. The average time of closure by the use of this modification is fifteen days, as compared to twenty days by the old method, and there were a number of cases that closed to all practical purposes per primum.

The technical modifications which have rendered the operation easier and results better are in connection (1) with the dissection method of exposure, and (2) with the manner of opening the prostate for enucleation. Briefly, the modified steps of the operation are: With the patient in the lithotomy position, a long prostatic tractor of the type used by Young for seminal vesiculectomy, or as modified by Geraghty for use in prostatectomy, is passed

unopened into the prostatic urethra as a sound might be. The curved perineal incision is made, and the space between the transversus perinei and levator ani bluntly opened up with the finger on each side of the rectum. The conjoined tendon is then severed over the rectum and, with the finger inserted, the prostatic tractor is felt and pushed on through into the bladder, where it is opened and pulled back so as to draw the prostate well up into the operative field, as is shown in Figure 1. There is now little difficulty in distinguishing with the finger the prostatic surface and the rectum overlying it, and the line of separation between prostate and rectum is very easily followed with the finger well on the lateral side, usually the right of the patient, as this is the more convenient for the operator, and in place of the careful dissection by cutting the rectourethralis and following the rectal surface on down to the membranous urethra, in the midline, as in the classical Young operation, the prostatic

surface on this lateral side, where there is no danger of opening into the rectum, is exposed by blunt dissection, the fascia of Denonvilliers recognized by its smooth, glistening surface, and with this line of separation obtained the tissues gradually pushed off by blunt dissection from the prostatic surface which can be raised well into the field by the intraurethral tractor. This same modification had been used by Doctor Geraghty and, while not followed as a routine, is readily seen to be more proof against any possible injury of the external sphincter, which is in no way approached by this procedure, as well as to hold less risk of opening into the rectum, and just as good an exposure of the posterior prostatic surface is obtained by thus pushing the recto-urethralis and adherent tissues to one side.

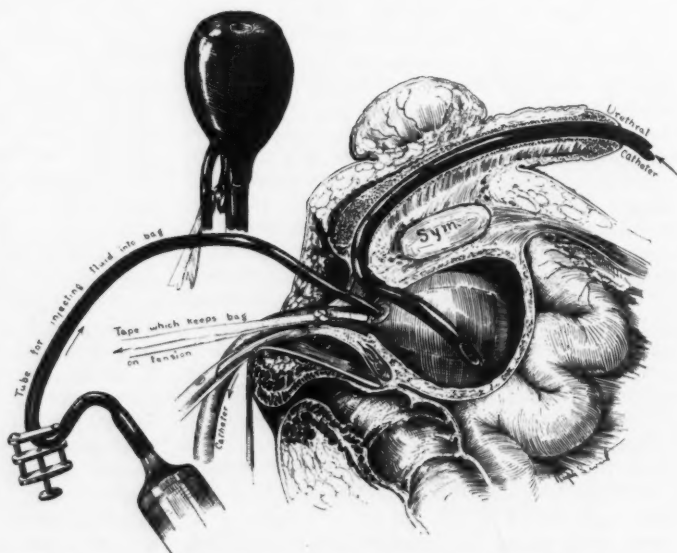


Fig. 4. Shows the bag in place in the bladder so that with traction gauze pack can be placed in the prostatic fossa against it and hemorrhage in the neck completely controlled.

The next step has already been described in detail and consists briefly of an inverted V incision of the posterior prostatic surface, with the apex just above the position of the verumontanum so that the resultant V flap can be drawn down, exposing the prostatic urethra with the glandular enlargements surrounding it, from which they may be enucleated en masse under the direct vision and with accurate preservation of the internal sphincter, as shown in Figure 2.

A third distinct addition to the perineal operation is the Davis modification of Hagner's bag for hemostasis, as shown in Figure 3, and which we now use in all cases, but with a urethral catheter.

#### DISCUSSION

GRANVILLE MACGOWAN M.D. (Brack Shops Building, Los Angeles)—Dr. Hinman has shown great wisdom in discussing the factors which determine the advisability of the immediate or delayed surgical interference where the symptoms of the prostate are annoying, and there is an inability of the bladder to completely empty itself, when he states in effect that the decision and advice must depend upon the blood chemistry of the patient and the dye output from the kidneys.

The patient with a small residual and a normal phenol-sulphonaphthalene output or a normal blood chemistry is the one in whom delay can be allowed, so long as he is willing to put up with the symptomatic inconvenience of the condition. But the patient, irrespective of the residual, whose kidney function is beginning to be impaired by reason of back pressure, is one to whom delay is quite detrimental.

The modification which he has devised, and after a sufficiently long experience introduces as a substitute for the operation of Young, has its advantages, in that by it the entire intracapsular adenoma mass may be removed, with the entire post-colicular urethra in one piece, as is so frequently accomplished by suprapubic manipulation, and with whatever advantages this may possess, on the other hand. It shares all the dangers that beset the unskilled or unwary operator who approaches the bladder-neck through the perineum in carrying out the Proust Young prostatectomy. Without prejudice, the truth of the matter is that the removal of hypertrophic prostates is much more frequently conducted by a surgeon of little experience and small skill than it is by an expert operating urologist like Hinman, and this condition always will remain, so the morbidity from the operation, and the excellence of the results obtained, may not be judged by the figures that he presents, either in the number of fatalities, or the perfection of the cure. The real urological surgeon should be able to do either a perineal or a suprapubic operation with equal skill and with entirely satisfactory results. But the poorly trained man who operates infrequently had better attack the prostatic cavity from above.

VERNE C. HUNT, M.D. (Mayo Clinic, Rochester, Minnesota)—Doctor Hinman's presentation of the modification of the classical perineal prostatectomy removes a former objection to that method of approaching the prostate gland, and obviates the danger of possible post-operative incontinence. He and the late Doctor Geraghty have contributed much to the practicability of the operation.

Unmistakable progress has been made in prostatic surgery, so well evidenced by the elimination of the time-worn argument of perineal versus suprapubic prostatectomy. Utilizing mortality rate and ultimate functional results as a basis for comparison between the suprapubic and perineal operations, when performed by those skilled in the respective methods, at the present time leaves little to be desired. Individualized pre-operative treatment in all cases has proved a most important factor in the successful management of prostatic obstruction, and a most important factor in the minimizing of surgical mortality, allowing a safe and successful operation by either method in skilled hands. An analysis, without prejudice, of the

reliable reports of series of cases operated upon by surgeons skilled in the respective methods of prostatectomy shows an equally minimum mortality rate and equally good functional results.

No longer may mortality and ultimate functional results, the criteria of merit of a surgical procedure, be used to discredit one or the other method of prostatectomy. The choice of method is dependent upon personal preference and the qualifications of the surgeon.

**Epidemiology of Poliomyelitis**—The most widely accepted theory concerning the mode of spread of poliomyelitis is that of direct contact through the upper respiratory passages. However, epidemiologic evidence of direct contact is scant. The proportion of cases ascribed to direct contact, made up largely of multiple cases in families, has been stated at around 5 per cent. It has been observed that the onsets of multiple cases in families as a rule so nearly coincide that they probably represent in the majority of instances simultaneous infection. When allowance is made for this, the proportion of direct contact cases is reduced to an extremely small figure. According to W. Lloyd Aycock, Boston (*Journal A. M. A.*), observation of the occurrence of poliomyelitis in Vermont over a number of years has borne out the idea that recognizable cases seldom occur in such relation to one another that they could be considered as resulting from direct contact; and yet, on the other hand, the time and space relationships between such cases suggest a more definite relationship than is implied in the abortive case healthy carrier theory of transmission. In a study of multiple cases in families it was found that, in the majority of instances in which more than one case occurred in the same family, the onsets were so close as to suggest simultaneous infection. More rarely, some patients were found attacked at a later date—after an interval of from ten to eighteen days—indicating that they were probably secondary infections. The idea of simultaneous infection is further borne out by the intervals between so-called contact cases. In New York City, in 1916, it was found that additional cases occurring in the same house but not in the same family likewise occurred in the majority of instances within such a short time of each other as to be considered coincident infection. In Massachusetts, in 1916, the majority of so-called contact cases (not in the same family) had practically simultaneous onsets. Aycock presents data in simultaneous onsets of poliomyelitis from common source infection; in common source groups with an interval of from ten to eighteen days between cases; in instances of poliomyelitis with an interval of from ten to eighteen days between cases; in isolated outbreaks of poliomyelitis, and time and space between cases in relation to transmission. Aycock feels that this study suggests that paralytic poliomyelitis is not infrequently transmitted from a given person to other persons with a definite range, but that transmission in such instances is not usually through direct contact between the individuals, nor through the intervention of missed cases of healthy carriers, but through some indirect means. This is illustrated by a recent outbreak, the epidemiologic evidence of which pointed to milk as the means of transmission.

Sixty centuries have elapsed since Egyptian medicine first made its imprint on humanity. The Greeks gave us a new conception of medicine as an art. True, the early leaders in medicine were not only physicians, but also priests and philosophers with little knowledge of anatomy, physiology or chemistry; but they implanted into the basic structures of our science the spirit of the healer.—Wendell C. Phillips, *Journal A. M. A.*

We are a nation of extremists. A little less food and a little more exercise would do most of us a lot of good. But when we take up exercising we generally go at it too strenuously, just as when we start dieting we go to the other extreme and begin to starve ourselves.—The Medical Standard.

What we call rational grounds for beliefs are often extremely irrational attempts to justify our instincts.

—Huxley.



## PREDISPOSING FACTORS TO PELVIC RELAXATION AND PROLAPSE (ETIOLOGY)

By JOHN VRUWINK \*

*Constitutional inferiority or debility plays a tremendous role in the causation of prolapse. Birth may tear or stretch the pelvic supports and suspensory structures so that herniation of pelvic contents occurs. Ill-advised mechanical measures to hurry labor increase the probabilities of hernia, and judicious interference under definite conditions and for definite purposes decreases the dangers of hernia. Finally, apparently normal women with normal passenger passage and powers under competent guidance may still develop more or less relaxation and even hernia following labor.*

*Adequate prenatal care to increase resistance, competent management of labor to eliminate tissue damage, and careful postpartum care to restore normality of tissue, does further safeguard women from the discomfort and disability of prolapse.*

DISCUSSION by Norman H. Williams, Los Angeles;  
Henry A. Stephenson, San Francisco.

THAT our knowledge of pelvic prolapse is still incomplete, is recognized by the absence of standard treatment. The fact that hernia is a definite factor in pelvic prolapse is coming to be generally recognized, and much confusion is eliminated by the knowledge that there are several varieties of hernia. They have a common cause, but the eventual pathology depends not only on the original location and extent of the lesion, but upon the age of the patient, duration of the lesion, subsequent activity with increased intra-abdominal pressure, tonicity of tissues, sepsis, repeated pregnancies, and labor.

The normal support of the pelvic organs depends upon the adequate function of each structure in the pelvis. The suspensory and supporting apparatus are interrelated, with a uniform function, and are even anatomically inseparable. The endopelvic fascia is the chief supporting agency, and in the healthy woman is probably more important than the suspensory supports. Lesions in the pelvic supports may be in one or several places, and hernia follows one or more of the four lines of cleavage described by Dickinson. Such pathological conditions are generally a cystocele, rectocele, and prolapse of the uterus; not uncommonly an enterocele or urethrocele. Only occasionally do the structures intimately associated with the posterior of the pubis or posterior to the rectum prolapse.

The occurrence of hernia may be congenital or acquired. Congenital pelvic hernia constitutes about 2 per cent of all prolapses. It obviously depends upon incomplete development and congenital weakness of the supporting and suspensory tissues. Physicians are more particularly concerned with the acquired form, which practically always is the sequelae of pregnancy, labor, or abortion. Therefore, its etiology is associated with the anatomy of the pelvis and the mechanism and management of labor or abortion.

The pelvic structures of one woman, in spite of

violence, may be adequate to prevent the formation of hernia, while in another even minimal trauma may be followed by various degrees of prolapse, including procidentia. The view is expressed by some that all forms and types of relaxation are due to inadequate or constitutional inferiority of tissue. It is reasonable to assume that constitution undoubtedly plays an important part in the developmental formation of muscle, ligaments and fascia, and we may reasonably assume that defective tissue is of primary importance as a predisposing factor in pelvic prolapse. Tissues, ill-constructed to withstand strain, with no power of elasticity, tear easily; tissues may stretch inordinately with resulting relaxation; or diastasis may occur, and hernia be an eventual consequence. Diet, outdoor life, and exercise play a dominant part in strengthening pelvic tissues and thus in preventing prolapse. There is an unwarranted accusation against the strong tissues and muscles of the athletic type of woman. But even so, there is little danger of revamping the ordinary or subnormal type into an athlete, regardless of strenuous efforts to do so in nine months, under the conditions imposed by pregnancy.

The maternal injuries of childbirth depend in part on the constitutional integrity of tissues, and in part on the mechanism and management of labor. *Every normal birth causes trauma of tissue.* Repeated births, particularly frequent births, increase this damage, and abnormal births are extremely liable to extend such injuries. The violence associated with precipitant or poorly managed labor is quite likely to increase the extent of injuries, and impair the function of the supporting and suspensory structures.

Prolapse of the upper segment of the pelvis usually follows damage to the supporting structures which center about the cervix. Relaxations of the lower plane center about injury to muscle and fascia forming the perineum.

Watkins says that injury occurs near the cervix both in bladder prolapse and in high rectocele, and that the tear is transverse because of a longitudinal force. Internal rotation occurs when the presenting part is in the cavity but still in intimate connection with the cervix, and such force is delivered transversely. The grinding, rotating action at this phase of the mechanism of labor is a potent cause of laceration and supplemental relaxation of the supporting tissue of the upper segment. Active measures to hurry labor before internal rotation is complete increases the liability to laceration in and around the cervix.

Some textbooks on obstetrics convey the impression that dilatation, flexion, internal rotation, and descent of the presenting part are synchronous movements, beginning with the onset of labor. Many interns have that conception. Progress of labor is confused with advance of the presenting part. More attention in the first stage should be focused on dilatation than on descent. Progress and advance are not synonymous. Everyone has observed, particularly in the multipara, that the head is frequently at the inlet and not engaged until the first stage is complete and that then flexion, internal

\* John Vruwink (1021 Pacific Mutual Building, 523 West Sixth Street, Los Angeles). M. D. Rush Medical College. Practice limited to Obstetrics. Hospital connections: Los Angeles General, Methodist, and Hollywood hospitals. Publications: "Low Cervical Caesarean Section," California and Western Medicine, November, 1925.

rotation, descent, and even delivery may be completed by one hard contraction. That this is not more widely known accounts for many precipitant labors.

Usually in multipara, not uncommonly in primipara, especially in occipit posterior positions with deflection of the head, advance does not always occur until dilatation is complete. If progress is confused with advance, as it frequently is, ill-advised attempts at delivery are instituted because the situation is considered abnormal, not because labor is arrested. The grind of internal rotation and the forceful longitudinal pressure, with the cervix almost dilated, is frequently augmented by binder, pituitary extract, excessive straining, and forceps because the head is high. The cervix is pushed downward by the presenting part, and frequently the anterior lip is caught between it and the symphysis and dragged still further downward. The inevitable results are tears in the fascia, and the pelvic organs are stripped from their attachments. Subsequent subinvolution, early activity, and increased intra-abdominal pressure may complete the unfortunate picture with first and second degrees of prolapse, atrophy of tissues later in life, and even advanced types of prolapse.

The delay of progress in labor is associated with various conditions: pelvic deformity; disproportion, maternal or fetal, or both; malpositions; breech; tumors; or anomalies of the power of labor. Delayed labor implies prolonged pressure and protracted overstretching. Prolonged pressure increases edema and friability of tissue, decreases the probabilities of physiological progress, and increases the damage of tissue because operative interference is high. Interference in the first or second stage of labor does not necessarily mean poor obstetrical management, for studied intervention, in the presence of definite pathological conditions, lessens the chances of injury to tissues with decreased resistance.

Prolonged labor is usually associated with two conditions: a full bladder and a full rectum, both of which are potent in increasing the likelihood of trauma. The bladder is firmly connected with the cervix and pubis, and the damage caused by straining against its incompressible contents causes a separation of these fascial connections and a subsequent sliding of the segment with bladder prolapse. The rectum is closely allied with the posterior vagina through the rectovaginal fascia, and by fascial bands to the coccyx and sacrum behind. Pressure against a rectum overdistended with hard fecal matter causes tearing in the rectovaginal fascia with potential rectocele, which is pulled back by its attachment posteriorly.

Complete dilatation and retraction are essential to normal delivery. Most damage to the upper pelvic floor occurs through operative attempts at delivery before complete dilatation. The unpardonable obstetrical error is the delivery by forceps through the undilated cervix, because it is impossible without serious tissue damage. Mechanical aids to delivery such as the abdominal binder, forceful straining with straps, or pituitary extract, are equally

deserving of condemnation. Straining by the patient is physiologically sound only when dilatation is complete, not when *almost* complete.

Injuries to the perineum usually result from management of labor in the second stage. An important etiological factor is the desire to deliver without laceration, allowing the head to press and bruise and overstretch the vagina for hours. Mechanical interference, with undue haste in effecting delivery, particularly when the forces applied to the forceps are not in the axis of the canal, materially increases the damage of all pelvic tissue. Such delivery in the presence of disproportion augments greatly the probabilities of tissue damage. Pressure from an unyielding perineum forces the presenting part against the structures of the upper segment and increases damage above as well as below.

The proper repair of all lacerations is a prophylactic measure to subsequent prolapse. Repair does not mean one, two, or three stitches inserted equidistant and tied so that the skin edges approximate. Adequate restoration of torn or cut tissues implies a careful restoration of individual severed tissue. Proper aseptic repair decreases the incidence of sepsis, and sepsis delays involution. The sepsis following abortion particularly after curettage, when the cervix is pulled far out, may cause a retrodisplacement, tissue injury, and delayed involution.

Delayed involution implies softness, laxity, and hyperextension of the suspensory apparatus and frequently a large uterus which falls backward. The traumatized supporting structures cannot withstand the extra strain, especially with increased intra-abdominal pressure, and gradually increasing prolapse results. Asepsis in labor is essential to proper involution, for complete involution decreases the burden of the supporting structure.

The puerperium is not without etiological significance. The interrelationship between suspensory and supporting apparatus which successively maintains the pelvic organs in position is essentially strong tissue. Some bruising, stretching and even tearing, is inevitable. Constitutional inferiority of tissue and excessive bruising of tissue demand sufficient rest and inactivity to allow of proper healing. This predisposing factor may be eliminated by the skillful management of the puerperium with emphasis on restrengthening the muscles of the abdomen and floor of the pelvis.

Intra-abdominal pressure in the presence of weakened supporting tissues is a very definite factor in maintaining and in increasing relaxation. Increased pressure must be avoided during the lying-in period, particularly during early attempts at urination and defecation, and a too early resumption of normal activity.

Conditions other than congenital causes not associated with pregnancy may be presumed to cause prolapse. The weight increase of tumors, hypertrophy of the cervix, faulty dress, resulting effects of pelvic inflammation, severe and constant effort and general debility in elderly women may be auxiliary, but practically never determining factors. The opinion has been expressed by many that prolapse

does not occur after accidents unless there is a fundamental defect predisposing to hernia.

#### DISCUSSION

**NORMAN H. WILLIAMS, M.D.** (1052 West Sixth Street, Los Angeles)—In his analysis of the causes of pelvic relaxation and prolapse Doctor Vruwink has by direction and implication developed prophylactic as well as remedial measures which, if carefully practiced, would diminish many of the ill results common in obstetrics. The mortality in obstetrics can be fairly well estimated, whereas the stupendous amount of morbidity can only be surmised. That it is all too common, however, is the daily observation of physicians. To be sure, there are inherent and constitutional factors predisposing to these results. On the other hand, much can be done to reduce the acquired injuries attendant upon childbirth as suggested in this discourse. The science of obstetrics has progressed slowly, as compared with many other branches of medicine. In prenatal care and in the application of aseptic principles its development has been greatest. Probably the most important phase for future progress lies in the reduction of maternal morbidity. This will develop only as higher ideals are formed and maintained by those engaged in this practice; as more and more the commonplace evaluation placed upon it by both physician and the nonmedical public gives way to its rightful place among the other branches of medicine; when there are fewer who practice mainly to retain the family clientele and more devote their entire energy and intelligence to it as a specialty.

**HENRY A. STEPHENSON, M.D.** (516 Sutter Street, San Francisco)—The essayist has indeed covered the subject in a most thorough and efficient manner. His division into constitutional and acquired causes is very good.

Inasmuch as the acquired causes are to a very large extent preventable, it seems to me that we should give most of our attention to them. The following seem to me to be the ones most often concerned in this particular condition:

1. Confinements in rapid succession.
2. Haste in delivery, particularly operative cases.
3. Neglect of lacerations in the anterior portion of the vagina, even when they seem very superficial.
4. Allowing patients out of bed too soon after delivery.
5. Malpositions following confinement.

The obstetrician and physician doing obstetrics should try to avoid these five factors, and by so doing prevent, in the majority of cases, pelvic prolapse.

**Teaching of Gastro-Enterology in Our Medical Schools**—In order to determine what position, if any, gastro-enterology occupies in the curriculum of undergraduate medical schools, Sidney K. Simon, New Orleans (Journal A. M. A.), collected information by means of a questionnaire. An analysis of sixty-six replies received shows that sixteen schools have made provision for a special place for gastro-enterology in the curriculum. In thirty-five schools special hours are devoted to the subject. In six schools a chair or subchair of gastro-enterology has been established. Simon is of the opinion that gastro-enterology is now in a position to press its just claim for recognition on the curriculum of the undergraduate school. He agrees with the prevailing sentiment of the authorities on medical education that a certain concentration of authority in the major clinical branches, three or four at the most, is necessary in order to conform with the real intent of undergraduate study, namely, to turn out general practitioners of medicine. Each special subject, though treated as a distinct subdivision, should be brought under the centralized control of the departmental chief. Nonetheless, the fact remains that gastro-enterology is fairly entitled to recognition in the plan of undergraduate teaching, and it is equally undeniable that instruction in the subject is best given by those possessing special training and experience in this particular field of work.

Of the 7000 prisoners in federal penitentiaries, 35 per cent are violators of the narcotic law.

#### COMPLICATIONS FOLLOWING PROSTATECTOMY

By J. C. NEGLEY \*

DISCUSSION by W. B. Parker, Los Angeles; Edward W. Beach, Sacramento; R. L. Rigdon, San Francisco.

**THIS** résumé, from the records of the Los Angeles General Hospital, covers the work of the entire staff from the oldest senior to the resident urologist and includes only cases of simple benign hypertrophy that had complete removal of the gland by the suprapubic route. No cases are included which developed complications after leaving the hospital, and most of them were under observation for a month or less. In all, 250 patients were operated upon. Bronchopneumonia occurred in 11 patients; myocarditis in 3; pyelonephritis in 3; peritonitis in 1; and hemorrhage in 2. Of the less serious complications, epididymitis, seven single and two double occurred in nine patients. Seven patients had residual urine, six of them had a half-ounce or less, and one had three ounces. Suprapubic fistula occurred three times in patients with residual urine. Contracture of the bladder neck troubled one patient; psychoses occurred in two patients, one of whom had a four plus Wassermann; and the other, from his history, had been somewhat subject to transient attacks of mental aberration for fifteen years.

**Bronchopneumonia**—In both the fatal and milder cases, bronchopneumonia began on or after the ninth postoperative day. As all patients had spinal anesthesia, the cause of the pneumonia cannot be laid to bronchial irritation from general anesthetic. Most of these patients had respiratory infection with coryza, sneezing, sore throat, and later a cough. It is a question whether such pneumonias originate with the patients from some already long-existing foci, or from sources outside the body. Since the vast majority of these patients have infective foci somewhere, it is my opinion that most of the bronchopneumonias originate in the patients and not from outside sources, so that prophylaxis against this complication must be directed against things existing within the patient. Infective foci should be removed, resistance built up and, above all, these debilitated old men should be kept in bed for a week or ten days and not subjected to exposure or exhaustion in the first few days after operation. All irrigations, dressings and treatments also should be done in bed for the first week at least. Needless to say, no patient with even a slight cough, rales, recent bronchitis, or other respiratory infection should be operated upon until he has fully recovered. Care should be taken that the patient does not have abdominal distention to such an extent as to cause pressure upon the diaphragm, thereby causing shal-

\* James C. Negley (809 Haas Building, Los Angeles). M.D. University of Michigan. Bachelor of Philosophy, Westminster College, 1906. Practice limited to Urology. Hospital connections: Los Angeles General, Pacific and Clara Barton hospitals. Appointments: Consulting Urologist, Pacific Electric Railway. Publications: "Calculi in the Kidney and Ureter," California and Western Medicine, 1923; "Spinal Anesthesia in Urology, with Review of 5500 Cases," California and Western Medicine, 1924; "Complications Following Prostatectomy," California and Western Medicine, 1925; "Syphilis in Pregnancy," Urologic and Cutaneous Review, 1922.



low breathing. Repeated hypodermoclysis under the breasts also at times causes so much pain as to bring about shallow breathing. This is given as one of the causes of postoperative pneumonia, i. e., the incomplete inflation of the lungs over comparatively long periods of time. Isolation and special nursing many times will save these patients even after pneumonia has become established.

**Myocarditis**—Prophylaxis against this complication should include digitalization of the patient or other heart stimulants should be used. Spinal anesthesia always should be employed. No patient should be operated on with a blood pressure at or near 100 systolic. Postoperative dangers are minimized by sustaining the blood pressure during operation and afterward by appropriate measures. We should guard against the injection of large amounts of fluid quickly. Giving 1500 or 2000 cc. of solution intravenously in a short space of time may precipitate trouble. Nor should we in our zeal to have the patient drink fluids force him to take more than two or three ounces at a time. Copious draughts of a pint or more of water at a time may lead to acute dilatation of the heart or spells of vomiting, which do not help an already weakened myocardium. Fluids are best given by hypodermoclysis or proctoclysis, to insure that they are not absorbed too rapidly.

**Pyelonephritis** is a complication that cannot be foretold by the phthalein test or blood chemistry when the preoperative kidney function is near normal. Most cases of pyelonephritis occur in patients who have a low but stationary phthalein output and in whom the bladder urine is highly infected with many different types of organisms. I do not believe that a ureteral catheterization is necessary before prostatectomy, but I am beginning to believe that ureteral catheterization in those patients with highly infected bladder urine is indicated. If examination shows one or both kidneys heavily infected, prostatectomy should be deferred even if the phthalein and blood chemistry findings are within the limits of safety.

**Hemorrhage**—Only rarely does a patient die from hemorrhages at the time of operation or shortly afterward. However, hemorrhage may, by lowering the resistance, prepare the patient for some other complication. This hemorrhage may be best prevented by the so-called open operation where the operative field is under direct visual control, and all ragged edges and tags can be removed and the edges sutured with a continuous or interrupted catgut suture. A Pilcher or Hagner bag against the prostatic fossae is the most efficient and least disturbing agent we have for the control of hemorrhage. Packing the entire bladder cavity with gauze is also efficient, but leads to varied degrees of tenesmus and pain and not inconsiderable shock on removal. Many and varied agents, either locally or by hypodermic needle, have been tried but are uncertain, and if relied on alone certainly are dangerous.

**Peritonitis** fortunately occurs in but a small number of patients and generally is the result of an accidental tear of the peritoneum. This is an acci-

dent which happens not infrequently, but if recognized and repaired seldom leads to complications.

Infection, including that about the wound, perivesicular, or in the space of Retzius, producing phimosis and scrotal cellulitis, makes this complication one of the most serious we have to deal with. It is entirely unnecessary if close attention is given to basic surgical principles. Many contend that it is impossible to operate without infection where urine and other purulent material must come in contact with the wound. This is true, but only relatively so, for if one reduces the size of the space likely to become infected he thus reduces the amount of the infection. This is best accomplished by an anchor suture through muscle, fascia and outer bladder wall just at the top of the space of Retzius so as to close off this space. This obviates a drain in this space and does not make of it a pocket which, when filled with infected material, makes of it a perfect bacterial incubator. Too much exposure of the bladder wall laterally should not be attempted, and in fact before the De Pezzer catheter is put in place, the space surrounding the incision area in the bladder should be watertight. Exponents of wide exposure of the bladder will contend that proper drainage will take care of any infection. This may be true, but if we eliminate dead spaces, infection and extensive drainage are unnecessary.

**Epididymitis**—This complication in a well-performed prostatectomy is annoying, and while it does not lead to fatalities it retards recovery and causes pain and lowered resistance to an otherwise uneventful case. The only sure way to prevent epididymitis is to perform a double vasectomy at the time of the first-stage operation, or if a one-stage operation, then at that time. Those who do not care to do this very trivial operation, must resort to the adhesive bridge or other mechanical supports, all of which are unreliable and unsatisfactory. Keeping the patient in bed for ample time, and gentleness in instrumentation and treatments help ward off this condition.

**Residual urine** results from a variety of causes, namely, contracture of bladder neck, failure to remove all gland substance with regrowth of remaining portions, occurrence of malignancy, failure to use sounds often enough and early enough, and occasionally the formation of calculi. Then the failure to get close coaptation of the edges of the wound around the prostatic fossae is probably the most frequent cause of residual urine. Care must be taken that these edges are brought together closely either by suture, the Pilcher bag, or a pack.

**Suprapubic fistula** generally comes from the same causes as residual urine, and where one is found the other exists. Any patient who has either or both of these complications at the end of a month should have a cystoscopic examination, and if tags or regrowths are present they can perhaps be fulgurated successfully.

**Uremia** is mentioned in textbooks, recent and late, as the most frequent cause of death. It was not a factor of great importance in my series of cases, and since the advent of blood chemistry and modern

kidney function tests, this complication ought to be ruled out before a patient is operated upon.

*Paralytic ileus* was not noticed in this series and in fact it is not often encountered. I have had one case and it was due to free use of magnesium sulphate by the patient without orders and too much morphine by the anesthetist before operation and by the nurse afterward.

#### SUMMARY

The percentage of deaths in this series of cases was 6 per cent. Five of the deaths were due to bronchopneumonia, which followed in the wake of the influenza epidemic raging when these patients were operated upon, and many patients who had other operations died from the same cause. There were three deaths from myocarditis following within ten days of the second stage in two cases, and occurring twelve days after a one-stage operation. Three deaths from pyelonephritis occurring fifteen, eighteen, twenty days, respectively, after the second stage of operation. Two deaths from hemorrhage occurred within forty-eight hours of operation; one a one-stage and the other a two-stage operation. One death from peritonitis occurring six days after a second-stage operation. One death from extensive cellulitis extending laterally to the bladder, in the space of Retzius, and into the scrotum three weeks after second-stage operation. Of the lesser complications, epididymitis showed a percentage of 3.6. This complication was avoided in those patients that had a vasectomy.

Residual urine occurred in 2.8 per cent, but six of the seven cases had less than an ounce and the other had three ounces. This patient had the further complication of malignancy about the bladder neck. These patients were under observation a month or less and were still having treatment with sounds and otherwise at the time they disappeared from observation, so this cannot be taken as an end-result.

Suprapubic fistula occurred in 1.2 per cent of the patients, but all were included as further complications in the cases of residual urine just mentioned. Contracture of the bladder neck occurred but once, and cystoscopic examination revealed no apparent cause; there were no tags, remains of prostatic tissue or malignancy.

In closing I wish to note as a significant finding in this series of cases that the nonprotein nitrogen in all complicated cases ranged between 35 to 50 per cent, but the other blood chemistry findings, sugar, uric acid, and creatinins were normal or nearly so. The phthalein test also was near normal in all these cases. This would lead one to believe that the non-protein nitrogen factor is to be more seriously considered and should make one hesitate to operate on those patients who range above 35 per cent non-protein nitrogen, even if all other factors are normal or nearly so.

#### DISCUSSION

W. B. PARKER, M. D. (Brack Shops Building, Los Angeles)—This report from the records of the Los Angeles General Hospital reflects great credit on the entire urological staff. These statistics are comparable with the records of any large hospital of similar character re-

ported to date. The percentage and average of complications are considerably less than any previously reported. All recent series reports of individual surgeons and hospitals show complications of major degree to be more infrequent. This is a gratifying consideration, undoubtedly due to careful diagnosis, better preparation and standardization of technique and post-operative care. Unfortunately no surgical patient is subject to so many complications as those operated on for prostatectomy. Despite this fact, urologists in recent years have placed prostatic surgery, perineal and suprapubic, as among the most definite of specialties.

Anesthesia is another factor of great importance, with a range of selection, which should satisfy the most meticulous in their choice of what they consider the safest for the individual patient. Local, spinal, nitrous oxide oxygen, and ethylene gas in their order seem to be those of choice for all types of prostatic and bladder surgery, especially for the known bad surgical risk.

Doctor Negley offers a very reasonable explanation as to the frequency of bronchial pneumonia, excluding the epidemic of influenza. Apropos of focal infection influences in the production of complications, following prostatectomy, great care must be exercised in their eradication. Liability of complications is always increased if focal infections are disturbed too close to or following prostatic surgery. Where any degree of emergency exists, wisdom will be shown in deferring all interference with focal infections until the attainment of a metabolic balance of safety, as referred to individual resistance.

Myocardial insufficiency, a frequent complication of the most embarrassing type, has been elucidated freely. Its occurrence, preventable to a degree by pre-operative care and digitalization, often occurs irrespective of the fame of the operator. Numerous recently reported fatalities should teach surgeons that all are born with only a definite amount of reserve to which no one can add a single iota. Conservation of reserve is responsible for the life expectancy of many post-operative prostatists who are alive. Therefore it is almost needless to add that the future overly ambitious operator may enhance the permanency of his reputation, built up in fields of less responsibility, by refusing prostatic surgery.

Before continuing the discussion, I must confess that a statistical resumé is the most difficult of all in which to render justice.

Epididymitis is preventable by vasectomy. British urologists have practiced vasectomy as a preventive of epididymitis for several years. Dr. Granville MacGowan, consultant of the urological staff, has successfully employed this method for many years.

Acute urinary retention of prostatic origin should not be subject to immediate surgical drainage, except in cases where it is impossible to enter the bladder through the urethra. In such instances, suprapubic drainage is much to be preferred for safe decompression of bladder retention.

The present use of the indwelling urethral catheter for the preparation of cystostomy has been found invaluable, thereby establishing a three-stage prostatectomy, especially applicable to institutional urology. Noticeable exceptions to the use of the indwelling catheter in preparatory relief of prostatic retentions are: hemorrhage with clots; calculi with or without a gangrenous type of cystitis. Should the operator attempt any surgical relief other than a suprapubic cystostomy in the latter, he is to be pitied more than censured. In this type of retention, a properly performed cystostomy with extreme care as to the protection of the space of Retzius will be most appreciated. Perivesical infection anteriorly or laterally is almost inexcusable. The simple technique of protecting the perivesical tissues from infection greatly lessens the difficulty of approaching the prostate for enucleation, the bladder neck for punch removal, or the trigone for section.

The general consensus of opinion in reference to blood chemistry findings and their interpretation as to operability and accuracy of prognosis, excluding the subjective element of an individual urologist, is that the blood urea is the most sensitive and variable of the accepted group and subject to the greatest amount of error. Creatinin is the most fixed of the entire group, requiring longer in-

terpretation and more experience. Nonprotein nitrogen clinically is next, in a majority opinion of urologists. Salivary urea is unquestionably an excellent guide, and has many exponents. Combined they are possible of interpretation to a high degree of accuracy. All are subject to error singly. Exclusion of the group and the preference of one would appear to be as fallacious as disregarding blood chemistry findings entirely.

The stability value of the phthalein test applied to prostatic obstructions is subject to more variation and confusion than comparative phthalein tests applied to differential renal function for kidney surgery, the latter probably correlated with nature's compensation concerning bilateral organs, where actual knowledge remains as yet a theory.

In reviewing the literature of complications following prostatectomy with special reference to functional results, one must conclude that a number of the most distressing failures are due to an inability to visualize the mechanics of a postoperative bladder. Excluding inoperable pyonephroses, diverticula, and central nervous system diseases, a sterile urine, an easily emptied bladder with at least some reduction of frequency, should be the end-result of prostatectomy. By far too great a host have been bewailing their poor results, due to operation by untrained surgeons, and, let us add, by urologists of the bizarre type; those, who for self-advertisement, refuse to accept well-defined methods or recognize well-established entities, simply because their name is not signed to the original article. The future better results in prostatic surgery will increase rapidly, with lessening of complication through research and standardization of technique regardless of the method of approach.

As to delayed healing, fistula and residual urine, either after suprapubic or perineal prostatectomy, most operators find there are a small percentage of patients who form granulation tissue too rapidly or with marked retardation. The endless grief of the one about offsets that of the other. Long experience probably will not aid one in forestalling a postoperative obstruction to the urinary outflow. Such a condition is just as capable of the production of partial incontinence. Fibrosis, anular and linear, or without atomy is strictly mechanical, often remediable by discerning clinical and diagnostic means.

EDWARD W. BEACH, M. D. (304 Plaza Building, Sacramento, California)—This paper pays tribute to the skill and clinical judgment manifested by Negley and his surgical colleagues in their management of prostatic cases at the Los Angeles General Hospital. The mortalities listed in these 250 cases but confirm one's opinion that prostatectomy with our modern diagnostic aids, with our modern understanding of blood chemistry and pathology, is truly one of the "safest" of all operations in experienced hands.

I am glad to hear Negley stress the elimination of all focal infection as a link in the chain of pre-operative preparation. Certainly, oral sepsis is vitally important in all cases, especially those in which a general anesthetic is to be administered. This is perhaps more important than the many factors he has mentioned in the postoperative cases to forestall bronchopneumonia. Another factor to be considered in postoperative chest conditions in these cases is the frequency of pulmonary embolism which, I believe, is sometimes mistaken for bronchopneumonia. Prostatectomy particularly favors pulmonary embolism. It is perhaps more often seen in these cases than following any other surgical procedure and necessitates the obviation of all except very urgent rectal manipulation following operation.

To me, one of the most important complications, and quite the most serious, is hemorrhage. In doing suprapubic work we had been using the gauze-packing method up until a short time ago. This method controls hemorrhage well at the time of operation; but in removing the gauze, in stages (not to mention the pain incident to withdrawal), it is quite the usual thing to produce varying degrees of secondary bleeding even six to eight days after the operation. Repacking is most difficult. It is also most painful, and frequently requires an anesthetic. Having had two patients with frightful hemorrhages, one of which ended disastrously, I cast about for a method other than gauze or bag. The method I am now using is not original, but is closely related to that suggested

by Schoonover, with certain modifications. It consists in using the Judd retractor and a third inferiorly over the pubes to obtain a good view of the intravesicle enlargement and the orifice. Two deep chromic sutures are placed in position, postero-laterally to the orifice at the side of the intravesicle tumor and tightly tied. A clean circular cut is made about one-half inch medial to the border of the adenomatous tumor through the vesicle mucosa, and this dissected back to the edge of the adenoma. The finger then breaks through anteriorly and enucleates the prostate in the ordinary way. The dissected mucosal edge is fastened with several deeply placed interrupted sutures to and over the edge of the fossa left after the removal of the gland. In this way, very little bleeding is encountered. Even before the last sutures are placed the first two sutures control most of the bleeding. Oozing is easily controlled by hot sponges and pressure, and rarely are suture ligatures necessary other than the above. This method has an added advantage, in that it tends to do away with mucosal tags and irregularities which, at times, distort, deform and even obliterate the orifice following operation, thereby leading to a permanent suprapubic sinus and residual urine or a contracted vesicle orifice with the attendant symptoms.

I believe this method facilitates rapid healing and certainly is a decided advantage over bags and gauze.

R. L. RIGDON, M. D. (291 Geary Street, San Francisco)—Doctor Negley has presented a paper that is well worth reviewing. It bears the earmarks of veracity, and no doubt gives a true picture of the results of prostatectomy as done at the Los Angeles General Hospital by men trained in that work, assisted by a staff that is also trained in the care of these patients. Evidently there was no selection of cases, other than to determine the diagnosis of benign prostatic hypertrophy. Nothing is said of the age or other condition of the patients, but we presume these factors were such as would be found in any large general city hospital.

The mortality is given as 6 per cent, or 15 out of 250. Five of these died of bronchopneumonia following a "flu" epidemic. The onset in these patients was such as to suggest a fresh infection; certainly it was not the onset of any ordinary postoperative pneumonia. It is very probable that all of these deaths should be attributed to factors lying outside the operation. In my experience, the so-called postoperative pneumonia never comes on with coryza, sneezing, etc., but manifests itself by cough, rise in temperature, and pain. It is my opinion that in a large number of my own cases in which post-operative pneumonia was diagnosed the true etiology was to be found in emboli or infection from the wound area.

Blood pressure is certainly a sign that should be taken into account. Thomas showed by statistics that a good pulse pressure was a very valuable aid in securing a satisfactory convalescence.

The control of hemorrhage is also important, and in some instances is not as easy as is pictured. Immediate hemorrhage should be controlled before the patient leaves the operating-table. As yet we have not attained to the ideal in this particular. The subject needs further study.

It is pleasing to know that vasectomy does away with epididymitis. So far, I have relied upon well-arranged support for the testicles so as to avoid all congestion, but in spite of this, epididymitis does occur. Double vasectomy is certainly worthy of a thorough trial.

DOCTOR NEGLEY (closing)—In closing discussion, my colleagues have left little for me to say.

Thanking Doctor Rigdon for his belief in the veracity of this report and answering him as to age of patients, all had reached the "prostatic age," i. e., over 55 years.

His statement that true postoperative pneumonia almost always comes from emboli or infection from the wound, is very true and emphasizes the fact that the wound should be made clean and kept clean by closing off the space of Retzius at the time of the first stage of operation.

Physicians must give a new significance to the word patient, for in the new order of things both sick and well people must and will be recorded in the lists of their physicians.—Wendell C. Phillips, M. D., Journal A. M. A.



## GIANT CELL TUMORS NOT CONNECTED WITH BONES

*'By* LENORE D. CAMPBELL \*

*Since the one constant and outstanding feature is the presence of giant cells, and since the real nature is undetermined, the simple term "giant cell tumor" of tendons, etc., might be employed in this class of growths. The descriptive adjective "xanthic" could be used when "foam cells" and yellow color are found. The term "sarcoma" is misleading and should not be used.*

*Since their benign character has been established, amputation is to be avoided and local conservative treatment advised.*

*It would be well for all work on these cases to be reported that the exact nature and origin be more accurately determined.*

DISCUSSION by Roy W. Hammack, Los Angeles; G. Y. Rusk, San Francisco.

THE purpose of this paper is to review the pathology of this comparatively rare condition, and to report three new cases.

The literature dealing with the subject, particularly with reference to giant cell tumors of the extremities, is voluminous.

The first nonosseous myeloid tumor was recorded by Broca in 1860. Four new cases were reported during the next twenty-five years, and the number rapidly increased until in 1913 Tourneux collected fifty-four examples. Stewart and Flint in 1915 found seventeen additional cases and reported two from Leeds, bringing the total up to seventy-three. Of these, two-thirds had been published by French and German authors. Broders in 1919 reported seventeen others from the Mayo clinic. Garrett in 1924 collected thirty fibromas in tendon sheaths from Johns Hopkins, the first occurring in 1896. These, with a few others reported during the last five years, brings the total number to about 130.

There are varied opinions concerning the real nature of the growth. All of the early observers called them giant cell sarcomas. Heurteux in 1891 did the first careful study and divided them into two groups: those more embryonic and rapidly growing, and those with more adult characteristics and slower growth. Certain French observers classed them under the general name "myelome," including those of osseous and those of fibrous origin.

Dor in 1898 was the first to describe the presence of xanthoma cells, and suggested the name "myeloxanthoma." Bonjour in 1897 thought they should be in a group falling between the sarcomas and fibromas. Bonhomme in the same year regarded the growth simply as a chronic inflammatory process. Targett considered these giant cell tumors malignant. Bellamy in 1901 made a detailed study of four cases and called them myeloid endotheliomas, as did also Grant and Stewart in 1914. Tourneux believed they were sarcomas of low malignancy, and classed them as xanthic tumors with giant cells. Flessig in 1913 advanced the theory

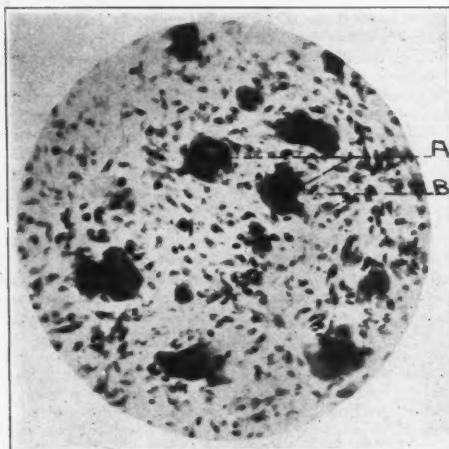
that they were granulomatous in nature, noting their resemblance to granulation tissue, the presence of xanthoma cells, and deposits of crystalline cholesterol associated with the giant cells in one case. He suggests the name of granuloma of tendon sheaths. Dunn thought they were on the border line between tumor growths and granulomas. Broders used the noncommittal descriptive term "benign xanthic extraperiosteal tumors of the extremities containing foreign body giant cells." Ewing discusses them under giant cell sarcomas. Buxton in 1922 called his two cases giant cell myelomas. Garrett in 1924 discusses his under the general head of xanthoma, and the subheading, fibroma of tendon sheaths; referring to Bloodgood's paper in 1905 in which the same term was used. He suggests we might call them endothelio-granulomas. Den Hartog in 1924 reports two cases from Amsterdam under the title, "So-called Xantho-Sarcomas."

So we see all opinions have been held from that of true sarcomas to simple granulation tissue, and the vocabulary has been nearly exhausted for a suitable descriptive term. Although the exact name is unsettled, the pathology is quite definite, as well as the clinical fact that they are essentially benign and should not be classed as sarcomas.

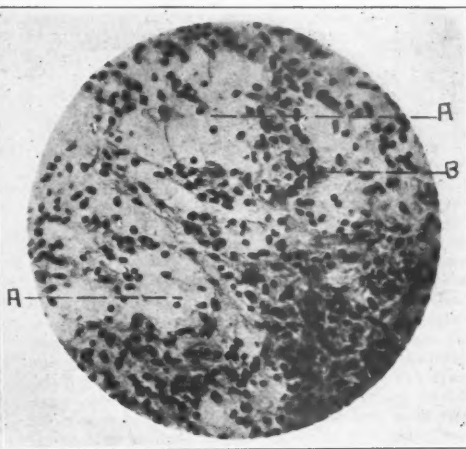
I shall briefly summarize the clinical picture and pathology as described by others. Etiology: In one-third of the larger series there is a history of trauma or of local inflammation. Age and sex: The sexes are affected in equal numbers. No age is exempt, but they are most frequent between 10 and 20 years. Symptoms: The only complaint is of a localized swelling, usually causing no interference with function. Location: They are found principally on the tendon sheaths or aponeuroses of the hands and feet, and most frequently on the flexor tendons of the right hand (where exposed to excessive friction). They are usually single, although a few have been multiple, and one case of bilateral growths on the tendon Achilles was reported by Ollerenshaw. They are small in size and not adherent to the bone. Duration: They are of slow growth, reaching moderate dimensions after a period of one to twenty years. Malignancy: All agree they are benign when below the elbow or the knees, and possibly malignant when above. They never form metastases and rarely recur, although 15 per cent of recurrences were reported by Garrett, which were cured by a second removal. Treatment: Amputation is unnecessary and local excision is all that is required. Macroscopic appearance: The tumors are small in size, seldom reaching the size of an egg, and are hemispherical or bean-shaped. They are firm, encapsulated, gray to yellowish pink in color, and often mottled by brown patches. Cut surface shows white streaks of fibrous tissue and marked lobulation. Microscopic appearance: This presents four main features, viz.: (a) stroma; (b) cellular elements; (c) vessels; (d) degenerative changes.

(a) Stroma: A dense fibrous capsule surrounds the growth and trabeculae extend inward, forming a supporting stroma and dividing the tumor into lobules. This shows some fibroblasts, is frequently infiltrated with tumor cells, and shows hyalinization.

\* Lenore D. Campbell (Loma Linda, California). M. D. College of Medical Evangelists, Loma Linda. Practice limited to Pathology. Hospital connections: Loma Linda Sanitarium and Hospital; White Memorial Hospital, Los Angeles; San Bernardino County General Hospital.



Illus. 1—Photomicrograph of tumor in Case 3.  
A—Giant cells.  
B—Tumor cells.



Illus. 2—Photomicrograph of tumor in Case 2.  
A—Xanthoma or "foam" cells.  
B—Tumor cells.

and pigment deposits. (b) Cellular elements: The mass of the tumor is made up of groups of round or polyhedral cells about 12 microns in diameter, with vesicular nuclei and distinct nucleoli. Few mitotic figures are seen. Giant cells of foreign body type are found in typical cases. They range from 9 to 100 microns in size, contain from 2 to 100 nuclei grouped centrally, and are scattered throughout the tumor. In over half the cases, xanthoma or "foam cells" are present. Broders found them in 64 per cent. These are round cells having a distinct cell membrane, a small dark nucleus, and very pale, staining cytoplasm which is filled with cholesterol lipid material. They are located in groups principally at the periphery of the growth, and give it the yellow color, hence the term "xanthic."

Wandering cells, mononuclears chiefly, are occasionally seen, but are not prominent. (c) Blood-vessels: These are abundant and frequently show signs of endothelial proliferation. Thin-walled, incompletely lined spaces are also described. (d) Degenerative changes are always present. Crystalline cholesterol deposits in the tissue spaces are noted in some instances, and the lipid material in foam cells is thought to be due to a degenerative change by some. Stewart and Flint examined frozen sections by the polarizing microscope in one of their cases, and proved a complete lack of doubly refracting lipid. Cholesterol, then, is not constantly present and probably has no etiological significance.

Hemorrhage and hematogenous pigment causes the brown patches seen grossly. The pigment deposits are composed of hemosiderin, and give a Prussian-blue reaction. It is believed to be caused by trauma and repeated hemorrhages. Calcareous deposits have been observed by some.

#### REPORT OF CASES

CASE 1—Jewish woman; age 60. Admitted to White Memorial Hospital February, 1925. Complaint: Growth on finger which began as a small nodule five months ago. No pain. No history of injury. Patient is accustomed to gardening and hard work. A small, round nodule the size of a pea was seen on the lateral surface of the left

ring finger near terminal phalanx. No tenderness or ulceration. Tumor was removed, using local anesthesia. The wound healed quickly, and there has been no recurrence to date. Gross: Small, lobulated, grayish tumor 6 mm. in diameter. Microscopic: In sections the tumor is seen 2 mm. below the surface epithelium. The structure is characteristic of the types described above, showing abundant stroma, polygonal cells arranged in strands, large number of foreign body giant cells, and a deposit of yellow-brown pigment. This is a typical example of a giant cell tumor of a tendon without xanthoma cells and giving no history of injury. The clinical course and microscopic picture confirm its benign nature.

CASE 2—Woman; age 60. Entered Loma Linda Sanitarium May, 1925, complaining of a small growth on the dorso-lateral surface of left index finger near terminal phalanx. This had been present for many years. It was removed under local anesthesia May 17. An irregular growth was found attached to the extensor tendon. Gross: Small oval-shaped flattened mass, 15 x 13 x 6 mm. in size. This is smooth, encapsulated, firm, and yellow in color. Cut surface appears lobulated, gray in central portion, and yellow with brown streaks at the periphery. Attached to this is some dense fibrous tissue in which two small flat tumors of similar appearance are embedded. Microscopic: Sections present typical structure of a giant cell tumor. There is a dense connective tissue capsule, and abundant hyalinized stroma. The smaller tumor cells show occasional mitotic figures. Giant cells are numerous, and many show marked eosinophilic cytoplasm. A few true tumor giant cells with vesicular overlapping nuclei are seen. Masses of pale-staining xanthoma cells are found at the periphery of the growth. Scharlach R stains them bright red. Much yellowish-brown pigment which gives a Prussian-blue reaction is noted. This is a second example of a tendon sheath tumor showing xanthoma cells and other characteristic findings. It differs from the usual in being multiple.

CASE 3—Irish male; age 40. Occupation: Lumberman. Admitted to Boyle Avenue Dispensary October 3, 1924. Complaint: Swelling on right side of neck, dyspnea, husky voice, and general weakness. Symptoms began two months ago. No history of injury. A large, smooth swelling in the region of the thyroid was felt on the right side. This was firm, not tender, and slightly movable. Laryngoscopic examination showed a smooth tumor mass bulging into the larynx, obliterating the view of the right vocal cord. The left cord was thick and swollen. Clinical diagnosis: Carcinoma of larynx or thyroid. Operation was performed January 26, in which a preliminary low tracheotomy was done and the larynx opened. A tumor was found bulging into the soft tissues of the neck and into the laryngeal cavity. No connection was found with any bone. It was impossible to

remove this in one mass, so it was curetted out in pieces by the surgeon, Dr. Hayton. The right cord and ala of the thyroid cartilage were also removed. Wound healed well and the patient was last seen on May 12, after he had taken a series of deep x-ray treatments. He breathes freely and could speak in a whisper. There was a slight swelling on the right side of the neck, but no glandular enlargement. It is too soon to be certain of a cure. Gross: Specimen consists of numerous irregular masses of grayish-red tissue and several pieces of cartilage, pieces ranging in size from .5 to 1.5 cm. The cut surface shows streaks and lobulation. Microscopic: This is a very cellular growth showing varied amounts of stroma. The appearance is similar to that in Case 1. There are greater numbers of giant cells which have eosinophilic cytoplasm. Some show phagocytic activity. The blood-vessels show definite signs of endothelial proliferation. Mitotic figures are occasionally seen. There are numerous deposits of brown pigment giving the Prussian-blue reaction. Stains for neutral fat show collections of fine droplets, principally in the stroma. Scattered through the tumor are spicules of bone and masses of cartilage. This is a giant cell tumor similar to those of tendon sheaths, but originating in an unusual location. (The question of origin from bone is excluded by the location of growth and statements of surgeon.) Bony changes probably took place during its development.

#### SUMMARY

More than 130 cases of giant cell tumors not connected with bones have been recorded, mostly by European workers.

Various names have been applied to these growths, as xanthoma, myeloma, endothelioma, and granuloma, but none has been universally accepted.

All agree that they are benign tumors and are cured by local excision, repeated if necessary. They are most frequently located on the flexor tendons of the hands and feet, and a history of injury is obtained in about one-third of the cases.

Macroscopically, they are small, encapsulated, lobulated growths, and yellowish or pink in color. Microscopically, the characteristic features are capsule and fibrous stroma, groups of small round tumor cells, numerous foreign body giant cells, frequently xanthoma or "foam cells" and collections of hemosiderin. Two new cases of giant cell tumor of tendons are discussed.

Another incidence of giant cell tumor of similar structure is described which apparently originated in the cartilages of the larynx.

#### CONCLUSIONS

1. Since the one constant and outstanding feature is the presence of giant cells, and since the real nature is undetermined, the simple term "giant cell tumor" of tendons, etc., might be employed in this class of growths. The descriptive adjective "xanthic" could be used when "foam cells" and yellow color are found. The term "sarcoma" is misleading and should not be used.

2. Since their benign character has been established, amputation is to be avoided and local conservative treatment advised.

3. It would be well for all work on these cases to be reported that the exact nature and origin be more accurately determined.

#### DISCUSSION

ROY W. HAMMACK, M. D. (Pacific Mutual Building, Los Angeles)—Tumors of this group are not numerous and are of little clinical importance. But they may assume

great importance if, as not infrequently happens, they are wrongly interpreted. The pathological diagnosis of "giant cell sarcoma" has led to unnecessary surgery. And so I believe that Doctor Campbell is entirely right in saying that these new growths should be called "giant cell tumors" or by some other innocuous term, and not sarcoma.

While it is true that in Doctor Campbell's third case the tumor was not connected with preformed bone, the structure seems more like that of the giant cell tumors of bone, and may belong to that group rather than to the group represented by the other two cases.

G. Y. RUŠK, M. D. (University of California Medical School, San Francisco)—The paper presents a valuable summary of the various ideas which have developed regarding this rather unusual type of growth found in association with tendon sheaths. That this type should be considered a true neoplasm, appears from its progressive and expansive, if benign, growth. They occur in places which are subject to trauma, and hemorrhage into their substance with secondary pigmentation may readily occur; possibly the fatty substances encountered represent lipoids of red cells, which lipoids have not been removed by the sluggish circulation of the part. The giant cells appear of foreign body type, and probably represent local irritation reactions in part associated with the lipoids. That mitoses are usually seen in small numbers may have led to their classification as sarcomata, and it becomes a matter of definition where they shall be placed. Personally I prefer to use a descriptive designation analogous to what the writer proposes.

The third case presents factors differing from the other two. From the report it appears to be of the giant cell sarcoma or epulis type, and probably the prognosis is not so favorable, especially on account of the difficulties encountered during surgical removal.

DOCTOR CAMPBELL (closing)—In closing, I wish to add a brief report of two cases which have come to my attention since writing this paper. One, the case of a woman with a small tumor of the thumb, was not unusual in any way, but presented the characteristics of this type of growth. The other was a man, age 51, who complained of a large growth on the right ankle. Thirty years before, he had sustained a bad sprain here, and three years later a small nodule appeared. This gradually grew to the present size. The growth was excised, and the patient made a rapid recovery.

The tumor measures 10 x 5 x 4.5 cm. and is surrounded by a fibrous capsule. The cut surface is yellow and brown mottled, and presents gray streaks of fibrous tissue dividing it into lobules. Sections show abundant hyalinized stroma and a few foreign body cells. The tumor cells are small and arranged in rows or groups, and large numbers of pale-staining, fat-laden cells are present. Microchemical tests show that some of these cells contain both lipid material and iron pigment. Some show a reddish color with Nile Blue sulphate and appear crystalline. This case is rather interesting, in that it is (to my knowledge) the largest growth of its kind reported, the largest in Broder's series being 8.7 cm. It is also unusual in the great predominance of lipid-containing cells.

I wish to thank Doctors Hammack and Rusk for their discussions.

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Before you start to interfere with your present bodily balance of flesh, fat and bone, make sure, with the best advice obtainable, that your present condition is not the best for you. What is "normal" for the woman next door might become a flesh burden to you. And what is normal for you might soon send her to the land of no returning. Overweight and underweight bring two distinct sets of danger signals and lead to two equally unpleasant and unsafe destinations.—The Delineator.

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The family physician of the future must have proportionate representation in the councils of his profession. No specialty or combination of specialties, not even general surgery, should be permitted to dominate the health affairs of a community or of a nation.—Wendell C. Phillips, J. A. M. A.



## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### GAUCHER'S DISEASE

By H. J. HARA and FRANK R. GUIDO\*

#### REPORT OF A CASE

In 1882 Gaucher first described a distinct type of splenomegaly which now bears his name. Although there have been reported in the literature nearly fifty cases of this disease, we have found none previously reported from this state. In view of this rarity, we submit the following report of a case:

H. W., a Japanese girl, born December 19, 1921, in Central California; normal birth. F. H. negative, both parents and paternal grandparents having negative blood Wassermann reactions. There are two brothers: one 3 years old, the other 1½ years. The older brother is developing physical signs similar to the patient's at the beginning of her disease. November, 1925, we noted a definite splenomegaly in him. Subsequent examinations have revealed progressive enlargement of his spleen and liver. Recently the boy had a fracture of the neck of left femur. In view of prospective splenectomy in the near future, we reserve a more complete report until a later date.

The girl has been sick much of her life. Bronchopneumonia, July, 1923; whooping cough, February, 1924; and lobar pneumonia, December, 1924. At that time the abdomen was distended, but there was no ascites. The liver was palpable and the spleen could be felt at the level of the umbilicus. There was no jaundice, although the skin had slightly muddy appearance. This was the first time we suspected the presence of a definite splenomegaly. January, 1925, she developed an acute edema of the left thigh. The swelling extended from the labia major to below the knee. The liver was enlarged to fully 5 cm. below the costal margin, the spleen extended 2.5 cm. below the umbilicus, and 5 cm. to the left of the median line. The swelling of the thigh disappeared in two weeks with no recurrence.

March, 1925, the child was taken to the Los Angeles Children's Hospital for further observation. At that time the blood Wassermann was reported 2 plus, but that has been the only time the blood Wassermann was ever positive. The abdominal examination then revealed an irregularly shaped tumor on the left side, the medial border in outline of the letter "S," extending to within 1 cm. of the median line and 2.5 cm. below the anterior crest of the ilium. There was no ascites, but there were fine pin-point hemorrhagic areas under the skin and a large hemorrhagic spot over the left knee. There was no general adenopathy; however, the skin of the leg, back, and abdomen had a mottled appearance. Several intramuscular injections of neosalvarsan were given, and as the patient got gradually worse the antiluetic treatment was discontinued, the patient leaving the hospital in three weeks. Throughout 1925 one of us called on her once or twice a month, observing the progress of the disease. The appearance of her skin remained about the same. She had frequent hemorrhages from her nose and gums. She would often squat on the floor or chair, having no apparent pain, but the progressive enlargement of her abdo-

men made it awkward to walk. Her mind was dull, but appetite remained fairly good.

December 22, 1925, the child again developed bronchopneumonia and entered the Los Angeles General Hospital. During the course of the routine examination we found her to be a diphtheria carrier. In ten days she recovered from her pneumonia, and in three weeks the Klebs-Loeffler bacilli disappeared from her throat. Up to this time the patient had a slight epistaxis every day. She perspired freely, the sweat having a sweetish odor.

**Laboratory Studies**—Wassermann blood, negative on all occasions except one; spinal, negative. Urine: Acid, 1022; no albumin; no sugar; no acetone; few epithelial cells. Icterus-index: Ten. Fragility test: Initial hemolysis at 0.46 per cent NaCl and complete hemolysis shown at 0.28 per cent. Blood chemistry: Sugar, 108 mg. per 100 cc. of blood; N. P. N., 37 mg. Bleeding time: One minute forty-five seconds.

	1/12/25	3/30/25	4/2/25	12/23/25	12/28/25	1/6/26
R. B. C.	4,470,000	4,250,000		2,980,000	2,440,000	2,344,000
W. B. C.	8,000	10,100	4,850	7,000	8,200	6,450
Hb.	78%			30%	30%	25%
S. L.	22	46		29	19	56
L. L.	15			7	6	
Polys.	63	54		59	75	40
Myelocytes				5		4
Platelets		1,500,000				993,000

**Operation**—From the above history, physical and laboratory findings a diagnosis of Gaucher's disease was made, and January 22, 1926, an operation was performed by Dr. Charles T. Sturgeon. The abdomen contained no fluid, the spleen filled the entire left abdomen and was attached by a firm adhesion to the diaphragm. The liver was enlarged to four fingers' breadth below the costal margin. There were no adhesions and the capsule was normal. The spleen, which was 20 x 13 x 3 cm. and weighed 1080 grams, was removed, as well as a triangular section of liver, and a gland at the hilus of the spleen and a left inguinal gland. A histological section was made from the specimen, and both Drs. G. D. Manor and Roy Hammack confirmed our preoperative diagnosis by finding innumerable large unique cells within the splenic pulp. Sections from the liver and glands also showed a number of Gaucher's cells.

The postoperative blood findings were:

	2/1/26	4/15/26
R. B. C.	3,450,000	4,310,000
W. B. C.	15,200	21,650
Hb.	70%	80%
S. L.	20	
L. L.	10	35
Polys.	56	64
Myelocytes	14	1

March 9, 1926, the girl was discharged from the hospital apparently cured.

### FAT EMBOLISM OF THE BRAIN

By NEWTON MILLER\*

#### REPORT OF A CASE†

A nurse, upon alighting from a street car in front of the Salt Lake County General Hospital, was struck by an automobile and hurled eight or ten feet to the edge of the pavement. The accident occurred about 12:15 a. m., Friday. Medical attention was rendered immediately. The patient was in charge of the men's surgical ward and, as far as known, was in good health.

**Physical Examination**—The patient was a well-developed, well-nourished woman, 34 years of age, and

† This case is reported through the courtesy of Dr. F. E. Straup, superintendent of the Salt Lake County General Hospital.

\* Newton Miller (Salt Lake City, Utah). M. D. Rush Medical College, 1924. A. B. 1905 and A. M. 1906, Indiana University. Appointments: Professor of Microscopic Anatomy at the University of Utah Medical School. Practice: General. Scientific organizations: Salt Lake County Medical Association, Utah State Medical Association, American Medical Association. Publications include a number of papers upon biological subjects, and among those that have a direct medical bearing are: "Gummata of the Heart"; "Anastomoses of Arteries and Veins in a Cat"; "Reproduction in the Brown Rat."

\* H. J. Hara (Moneta, California). M. D. College of Medical Evangelists, 1918. Graduate study: Glendale Sanitarium and Hospital, 1917-18. Previous honors: Instructor in Medicine, 1918-24, College of Medical Evangelists. Present hospital connections: White Memorial Hospital, Los Angeles. Present scientific organizations: Fellow of American Medical Association, California Medical Association, Los Angeles County Medical Society. Practice: General.

Frank R. Guido (Chicago, Illinois). M. D. Rush Medical College, 1925; S. B. Loyola University, Chicago, 1923. Internship, Los Angeles General Hospital. Present appointments: Instructor in Medicine, Rush Medical College. Practice: General.

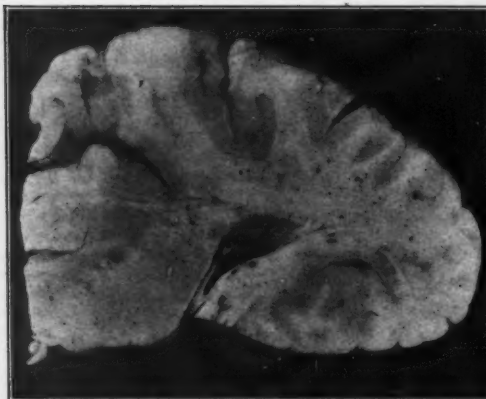


Fig. 1

Photograph of the posterior part of a horizontal section through the middle portion of the right internal capsule.

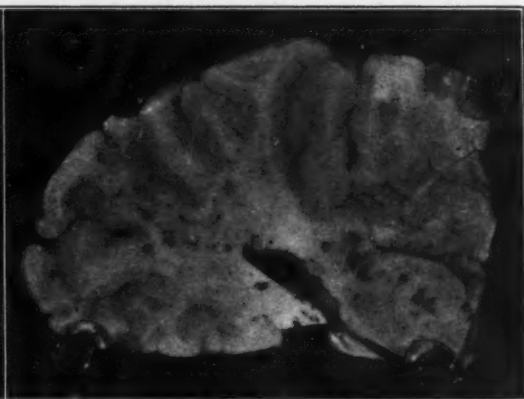


Fig. 2

Photograph of a section taken 1 cm. below and parallel to the one in Fig. 1.

weighed about 140 pounds. She was in partial shock, vomiting, and complained of headache, severe pain in the right leg, and vague pains in the body. She was fully conscious and gave a lucid account of the events leading up to and including the accident. There were slight abrasions on the face; no bleeding from the mouth, nose, or ears. The sides of the face were symmetrical. There was no ptosis, strabismus, or nystagmus. The pupils were equal, regular, about 4 mm. in diameter, and reacted to light and accommodation. There was no evidence of trauma on the chest. No abnormalities were noted in the lungs or heart, except the increase in the rate of respirations and heart beats. The abdomen was flat and without marks of trauma or areas of tenderness. There was a simple fracture in the middle third of each of the right tibia and fibula; no other evidence of injury on the extremities; no limitation of active or passive movements.

One hour after the accident the patient was anesthetized with ether, the fracture reduced, and the leg placed in a Thomas splint. The day and night were passed without any noticeable untoward symptoms. The patient was apparently still sleeping at 8:30 a. m. Saturday. She was reported to be in partial coma two hours later, with some spasticity, especially of the muscles of the right brachium. The spasticity proved to be intermittent, which caused some confusion among the doctors who could not always demonstrate the rigidity. Involuntary urination began at 11 a. m., at which time only  $1\frac{1}{2}$  ounces of urine were obtained by catheterization. The left pupil was reported to be a little more dilated than the right. X-ray plates of the skull gave no positive evidence of a fracture. However, a constant horizontal line across the left parietal about 4 cm. above the level of the external auditory meatus was suggestive of a fracture. At 9 p. m. the patient could not be aroused. Her respirations were more frequent; her pulse rate, 132; blood pressure, 122/74; temperature, 101.5 degrees F. At 8 a. m., Sunday, the oculist recorded a 20-degree divergence of the eyes, but no inequality of the pupils. The optic discs were slightly blurred and the retinal veins enlarged. The latter were considered to be within the range of normality. Deep coma persisted, and there was little change noted except frequent flexion and extension of the left thigh. A spinal puncture was made at 11 a. m., and the fluid which was obtained was clear and fell in drops from the trochar.

A subtemporal decompression was decided upon after several consultations, although no conclusive signs of intracranial pressure existed. The calvarium was opened through the right parietal at 12:30 p. m. An echymotic area 2 cm. in diameter was divided in incising the scalp. The parietal was highly vascular, and some difficulty was experienced in controlling the bleeding. The meninges were intact, and no extravasated blood was found. There was no bulging of the meninges, and the brain fell away from the calvarium at the opening. The meninges were not incised. A fracture could not be demonstrated. The

rapid failing of the patient necessitated an intravenous injection of normal saline and adrenalin before the wound was closed. After leaving the operating-room, the condition of the patient grew gradually worse with the temperature steadily rising, the pulse rate increasing, and the respirations becoming irregular. Supportive measures had very little effect upon the subsequent course. The blood pressure at 8 p. m. was 106/60. Death occurred at 11:50.

**Necropsy**—The examination was limited to the head. The scalp had been shaved. There was no change in the scalp except a small amount of echymosis about the operative wound. The incised bones were 6 to 9 mm. thick. There was no fracture of the skull. The meninges were free from extravasated blood except at the site of the operative wound. There was no gross change in the vessels of the leptomeninges. The subarachnoid fluid was clear. The cortex was intact at all points, and no echymoses or petechiae were visible in it. All of the convolutions were smooth and rounded. Upon sectioning the brain, numerous petechial hemorrhages, fusiform, 0.5 to 3 mm. long, circular in cross section, 0.1 to 1.5 mm. in diameter, were seen throughout the white substance. None was found in the cortex or basal ganglia. These hemor-

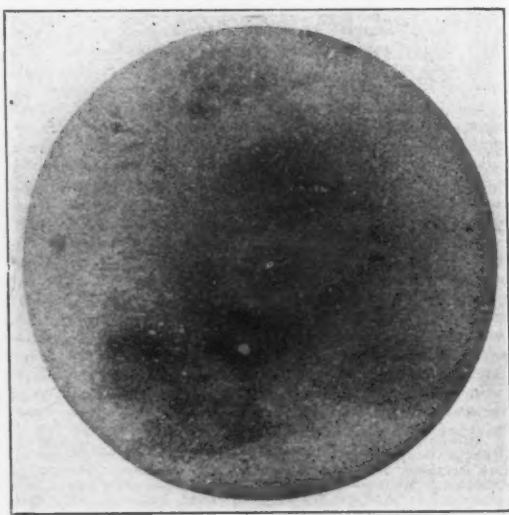


Fig. 3

Microphotograph of a paraffin section made from the right occipital radiation. Three stages of resorption of the petechiae are represented.

rhagic spots were discrete for the most part and most numerous in the internal capsules, cerebral peduncles, corpus callosum, pons and medulla (Figs. 1 and 2). The ventricular fluid was clear. There was no alteration in the size or shape of the ventricles.

**Microscopic Examination**—The hemorrhages were the only changes noted in the brain. The petechiae were limited to the white substance and measured 0.05 to 3 mm. in diameter. One or more capillaries or arterioles occupied the central part, as a rule, of each transverse section of a petechia. These vessels, in paraffin sections, were empty and distended; in frozen sections, they were filled with fat. The most common type of petechiae had a vessel centrally located and filled with fat, about which was a pale blue layer with cell outlines but no nuclei. Encircling this was an outer and broader layer containing many lymphocytes and erythrocytes. The latter in some petechiae stained deeply, while in others only the outlines were present (Fig. 3, the central petechiae). Hemosiderin was in abundance. In another type all of the red cells stained deeply were packed about the vessels and infiltrated the brain substance. An occasional lymphocyte was present, and also a variable amount of hemosiderin. In a small per cent the nervous tissue was torn. The extravasated cells in some instances were confined to the perivascular lymph spaces. A third type had a small number of lymphocytes in the outer margin of the petechia, with no intact blood cells between these and the vessels. Red cells were absent. The involved brain tissue was unchanged except for the presence of a small amount of hemosiderin and nuclear fragments (Fig. 3, petechiae at the top and right). Fat, engorged vessels without perivascular changes were found elsewhere than in the petechiae.

#### CONCLUSIONS

1. There were numerous petechial hemorrhages confined to the white substance of the brain and presumably of the cord also.
2. Fat filled the capillaries and arterioles within the petechiae.
3. Fat, engorged vessels were found elsewhere than in the petechiae.
4. Emboli evidently began lodging in the brain soon after the accident, and continued to do so up to or near the time of death.
5. Definite cerebral symptoms appeared within thirty hours after the injury.
6. Death was due to the impairment of important fiber tracts.

### CONGENITAL ABSENCE OF THE LOWER PORTION OF THE RECTUM AND ANUS

By PAUL R. WALTERS, M. D., *Dinuba, California*

#### REPORT OF A CASE

The following report is made because of the infrequency of this abnormality (Keen states this condition occurs about once in every eight to ten thousand births, and that it is very common for this defect to be overlooked at birth), and secondly to emphasize the importance of careful examination of the entire body of the newborn child.

On the afternoon of the 19th day of September, 1923, while in the midst of a busy afternoon's office practice, I received a telephone call to come five miles into the country to see a woman who had just delivered herself of an infant three weeks premature, this being her fourth child. Hastily bundling up my obstetrical outfit and with my office nurse, we proceeded as rapidly as possible to find the mother in bed with her female (7½ pounds) baby still attached to the cord and the placenta still undelivered. The cord was ligated and severed and the child handed to the nurse to be cleansed, during which time I made delivery of the placenta. Instructions as to the care of the mother and child were given to the so-called practical nurse, who was to take care of this patient in her very humble home, and, after having an affirmative reply that everything was all right to the question asked my nurse,

we jumped into the car and drove back to the office to resume the afternoon's work.

On September 21, forty-eight hours later, I received a second call to the house. The message was as follows: "Doctor, come quick, the baby is all swelled up and cannot move its bowels." Arriving upon the scene, a careful examination was made of the baby. I found the child's abdomen distended and tympanitic, the pulse very fast, and the baby screaming with pain. There was an entire absence of the anus and the anal dimple. The history from the woman in charge of the baby was that it had voided urine several times, a dark color, but had begun crying in the morning. She had administered castor oil to make the bowels move, but no results. Owing to the distension of the abdomen, it was impossible to make out any of the abdominal organs. It was explained to the father and mother that an operation was urgently needed. The child was taken to the Dinuba Sanitarium at 4 p. m. and, under ether anesthesia, an incision was made on the left side, just below the umbilicus, corresponding to a left McBurney's. Upon entering the abdominal cavity, the intestine bulged through the incision and interfered considerably with a careful examination. Digital examination, however, revealed the rectum terminating in a blind pouch, the end of the pouch on a level with a line drawn through the pubis horizontally, the funnel-shaped end of this pouch terminating in a hard fibrous cord, running toward that space between the posterior vaginal wall and the coccyx. It was decided that it was impossible to draw this pouch down and put the opening in the region of the normal anus. Instead an emergency left inguinal cholestomy was done. Owing to the lack of preparation of the patient and distension of the entire intestinal tract and smallness of the baby, we feared the baby would not survive the operation. And to our surprise the child made a rapid recovery from the operation, remaining in the hospital from September 21 to October 10. During this time the baby gained in weight, ate and slept well, being fed on artificial food (modified milk). There was an average of three bowel movements a day of semi-solid character through the small cholestomy opening. The child was kept clean by using slight pressure on the site of the opening. At the time the child left the hospital it was progressing very well. Owing to the poverty of the family and their inability to financially take care of the baby, the County Welfare Nurse moved the child to the County Hospital twenty miles away. It remained in the County Hospital ten months, during which time it grew and developed rapidly. When the child was eleven months old, a surgeon attempted to operate upon the baby and create an artificial anus in the normal position. The baby died on the operating table.

Da Costa states that there are two forms of this abnormality: One in which the rectum empties into the bladder, vagina or rectum, and another in which there is no rectal opening, either upon the surface of the body or the urinary organs.

Keen's figure 82, page 119, volume 4, corresponds to the anatomical abnormality found in this patient. Keen, under the classification of Imperforate Anus, divides the abnormality into four types: (1) congenital narrowing of anus without complete occlusion or without fecal fistulas elsewhere; (2) closure of anus by thin membranous tissue; (3) entire absence of anus, the rectum ending in a blind pouch at varying distances from the perineum; and (4) imperforate anus with fecal fistulas opening (a) into uterus and vagina; (b) into male bladder or urethra; (c) or on the surface of the body.

My case corresponds with Keen's No. 3 type.

Keiler states that a study of the factors involved will make it apparent that an imperforate anus will mean anything from the mere persistence of a cloacal membrane to a total lack of development of the rectal or the anal part of the canal.

Keith, in 1908, dissected and described 114 specimens of imperforate anus which he was able to procure from London museums. He grouped the more usual abnormalities which he found into two diagrams, according to the sex of the infant, and states that it seems that the patient with a normally formed anal pit has a less serious deformity. The interesting portion of Keiler's report to



the surgeon is as follows: The importance of obtaining that information as to whether the rectal canal is properly developed, and in such cases it is important, if possible, to obtain this information before operating. If x-ray facilities are available, and there has been time for gas to accumulate, the gas may show the lower limit of the rectum. Opaque meals or injections are, by the nature of the case, impossible. Occasionally the urorectal septum, in separating the rectum from the urogenital sinus, carries too deeply with it the peritoneal covering which forms the pouch of Douglas in the female and the vesicorectal fossa in the male. Under such circumstances the peritoneum may pass under the lower extremity of the rectum and the peritoneal cavity may be entered in the attempt to reach the rectum from below.

There is seldom any way by which the operator can obtain information on this point before he commences his dissection, and his only safeguard is to bear this danger constantly in mind, and be prepared to protect the peritoneal cavity from infection should he inadvertently or of necessity enter it.

The particularly interesting facts of the case reported above are: (1) absence of the anal pit; (2) height in the abdomen of the blind pouch; (3) the peculiar and interesting fibrous cord-like tissue running from end of the pouch to the coccygeal region; (4) failure of recognizing the deformity at the time of the delivery; (5) the excellent recovery and growth of the child from time of the emergency operation until the second operation; and lastly nonadherence to the rule laid down by Keen, not to attempt to make restoration of the parts while the child is so young.

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### INTERNAL HEMORRHOIDS IN AN INFANT

By LLOYD A. CLARY, M. D., *San Francisco*

#### REPORT OF A CASE

Some of the older writers on rectal diseases flatly deny the existence of true internal hemorrhoids in infancy. Other authors—including those of today—either do not mention the subject at all or state that the disease is exceedingly rare. Pediatricians practically ignore the subject. No report of this condition appears in current medical literature during the past ten years.

Baby V., a boy, age 26 months, was brought to my clinic at the French Hospital, April 1, 1926. He was a precocious child, stood at 6 months, walked and talked at 9 months of age.

Since 8 months of age he has had protrusion from anus following straining at stool. He always had to strain at stool, though the mother stated that he was never constipated. Bleeding appeared at the time the protrusion was first noticed, occurred with bowel movement and was copious at times. Pain with bowel movements was marked. Pain, bleeding and protrusion have been growing worse during the past two months. The baby had become nervous and fretful and slept very poorly.

Under the direction of her family physician the mother had been using vaseline and had been dilating the anal canal with her finger.

Examination was very easy, as the baby had been trained to bear down when told to do so by his mother. On his straining down, two large internal hemorrhoids, right and left posterior, were forced out. Anoscope was inserted easily and smaller hemorrhoids found anteriorly. No other pathological condition found.

I hesitated to advise operation in so young a child. However, the mother desired a tonsillectomy, so I agreed

to operate at the time the tonsillectomy was to be done to save an additional anesthetic.

Operation under ether anesthesia, April 6, 1926. Due to recent catharsis the hemorrhoids were all protruding at the time of operation. They were enormous for a child, especially the two posterior, and would have been considered large even for an adult. There were four distinct hemorrhoidal masses of the internal thrombotic type, right and left posterior, and right and left anterior. They were covered entirely by mucous membrane and did not involve the skin surface. There was no prolapse of the rectum. Each hemorrhoid was dissected out, excised and the wounds closed with fine plain catgut.

The child was up and around the day after operation and left the hospital April 10, 1926.

On June 17, 1926, the mother brought him to my office. The parts were healed perfectly. She stated that the nervousness had disappeared and that the child had been sleeping well since the operation. He has free bowel movements daily without straining.

This was a case of true internal hemorrhoids in an infant and was not one of rectal prolapse. Results of operation apparently are good.

1195 Bush Street.

**Sympathectomy in Angina Pectoris**—From a consideration of seven cases reported on by Elliott C. Cutler and Jacob Fine, Cleveland (J. A. M. A.), it becomes evident that a single or bilateral extirpation of the superior cervical ganglion or of the entire cervical chain and first dorsal ganglion for the relief of angina pectoris will frequently give temporary, complete or partial relief and often will fail. The complete operation is less likely to fail entirely, however, than simple superior ganglionectomy. In certain cases it appears that what was considered a leftsided angina before operation has been converted into a rightsided angina by a left Jonnesco procedure. This, however, means that the leftsided angina was relieved and the residual rightsided angina, not noticed by the patient preoperatively because of its comparative insignificance, now remains. Contrary to the conception of the anatomic factors involved, from which it would seem that proper sensory nerve ablations ought to stop the pain immediately afterward, certain patients eventually totally relieved, even after complete bilateral Jonnesco procedure, will still have pain, as a rule reduced in severity, postoperatively for a few weeks or months. This is ample evidence to indicate the insufficiency of knowledge concerning the sensory innervation of the heart. The authors have in no case observed any deleterious effects on the cardiac capacity of the patient as a result of operation. A few have expressed the opinion that cases of syphilitic angina are particularly dangerous cases for operation. Cutler and Fine feel that the cases that are particularly dangerous are those which present advanced cerebral arteriosclerosis combined with severe coronary disease. They will not tolerate any surgical procedure well, and it seems as if sympathectomy makes them definitely worse, although it may relieve the pain. Among the most distressing postoperative complications of the procedure are the by-effects of sympathectomy, which seem to be directly proportional to the degree of nerve resection. That surgery will come to have a definite place in angina pectoris seems promising, but it is impossible as yet to say definitely which is the most desirable procedure of those proposed. Cutler and Fine lean in favor of the partial Jonnesco procedure, unilateral or bilateral, depending on the individual case.

The notion that a majority must have its way, whether in matters of opinion or in matters of personal conduct, is as pestilent and antidemocratic a notion as can possibly be conceived. The majority has no function whatever in matters of opinion or personal conduct, and can have none unless all morality is to be abandoned. The rule of the majority is simply a working plan to decide upon policies in matters of common or general concern.—Nicholas Murray Butler.

Beware of the filthy, friendly, fraternizing food-fer-tilizing fly.—Ohio Health News.

## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### BRIEF OF EVIDENCE THAT WARRANTS SURGICAL INTERVENTION IN PULMONARY TUBERCULOSIS

The Editor—The subject discussed here was suggested by a doctor, himself a sufferer from the disease, and who could not make up his mind to follow the advice of some of his colleagues to try surgical intervention; nor could he be satisfied that other advice against surgery promised enough. Unquestionably, resting the diseased part of a lung by surgically produced pressure proves of decided value to many patients. On the other hand, it endangers the welfare of other patients.

Is it not probable that too many cases of tuberculosis are being treated by standardized methods and not enough patients treated by carefully studied-out methods based upon equally careful diagnosis? If any thinking person has a doubt about the individualism of sick people, there are lessons enough in the study of patients with tuberculosis to open his eyes.

There is food for serious reflection in the illuminating discussion which constitutes this chapter of *Bedside Medicine for Bedside Doctors*. We don't know that there is anything "new" in this discussion. We hope not, because it is not the exploiting of the "new" that is of first consideration to the bedside doctor, but the practical, honest, earnest, intelligent application of existing knowledge that counts most. There is much here that will help if in no other way than by causing the doctor to pause, consider, reflect, study.

We are still delighted with the hearty and encouraging messages that come to us commending *Bedside Medicine for Bedside Doctors*. We are glad to have any suggestions, so send them in.

Leo Eloesser, M. D. (490 Post Street, San Francisco)—Artificial pneumothorax has become well established as a valuable method of treating certain forms of mainly unilateral pulmonary tuberculosis. It has been fairly generally used for the last twenty years; there are statistics at hand embodying the results of numerous prolonged observations which make us as certain as ever we can be of any method of therapy, that compression of the lung by air introduced into the pleural cavity is of benefit in certain cases of tuberculosis. The evidence is so definite that it is but a step farther to seek to extend the benefit of pneumothorax to those cases that needed it but in which adhesions between the two layers of pleura prevented its induction. Attempts were made to sever these adhesions by open operation: these attempts were abandoned; the results, with few exceptions, did not warrant the risk of so gross and sudden an insult.

There remained two further possibilities: to compress the lung indirectly by influencing the two structures which, by their rigidity, resisted the natural shrinkage seen in many—in practically all—old, chronic, mainly unilateral tuberculosis; these two structures being the ribcage and the diaphragm. The third structure confining the lung, the mediastinum, is mobile enough to yield by itself. The ribcage is far more rigid and more important than the diaphragm; its excursions make up about three-fourths or four-fifths of the act of breathing, leaving for the diaphragm one-fourth or one-fifth. Logically, then, if

compression of a tubercular lung is desirable but unattainable technically owing to pleural adhesions, and if an open severance of these adhesions is impractical, we are driven to a consideration of compression either by removing the resistance of the ribcage or of the diaphragm, or both; provided always that these operations entail no greater shock or risk than a tubercular patient may reasonably be expected to weather, and that their results have the same benefits as the procedure which they were designed to supplant, viz., artificial pneumothorax.

A sufficient period of observation and a considerable body of statistics, covering now well over one thousand cases, prove that these operations do, in fact, do what was expected of them and do not exceed the limits of the proviso: that they do compress the lung and that their risk is not great. The resistance of the ribcage is overcome by resection of a small portion of all of the ribs, letting the ribs collapse like the shutters of a Venetian blind; the diaphragm is paralyzed and allowed to rise by resection (evulsion) of the main phrenic nerve together with its subsidiary branches. The latter operation is the simpler and easier one, but, as may be expected, alone it is usually insufficient; it is of value as an aid to thoracoplasty and to certain cases of partial artificial pneumothorax. Thoracoplasty has definitely established its value.

The results, taken from a large body of statistics, are roughly: cure one-third; improvement one-third; course of disease uninfluenced and death one-third. The material being recruited from among tubercular patients whom medical care has been unable to cure and whose outlook is bad, the one-third of cured patients may be considered as clear gain, the one-third benefited as respite for a greater or lesser time from the doom awaiting them, and the remaining third of failures as but completing the sentence pronounced upon them by their disease.

F. M. Pottenger, M. D.\* (Monrovia, California)—In discussing chest surgery it is necessary to bear in mind that we are considering measures devised to relieve a condition which should rarely, if ever, be permitted to exist. This measure is only applicable when the disease has extended to such a degree that a complete healing is practically impossible without some aid beyond that of the ordinary

\*Francis Marion Pottenger (Pottenger Sanatorium, Monrovia, Calif.). M. D. Cincinnati College of Medicine and Surgery, 1894. Other Degrees: Otterbein College, Westerville, O., Ph. B., 1892; Ph. M., 1897; A. M., 1905; LL. D. (honorary), 1909. Graduate Study: Postgraduate medical course in Europe, 1894, 1905, 1907, 1909; and in New York in 1900. Previous Honors: Lecturer Tuberculosis and Climatology, Depart. of Medicine, Univ. of Southern California, 1903-04; Professor of Clinical Medicine, Univ. of Southern California, 1905-09; Professor of Diseases of the Chest, Coll. of Physicians and Surgeons of Univ. of Southern California, 1914-20; Founder and for three years President of Southern Calif. Anti-Tuberculosis League, 1903-05; Chief of Helping Station, Southern California Anti-Tuberculosis League, 1906-08. Present Hospital Connections: Medical Director of Pottenger Sanatorium. Scientific Organizations: Member Los An-

curative measures. Let us not forget to emphasize the fact that there is a time in the course of early tuberculosis when nearly every patient could be restored to health if he were given adequate treatment—adequate both as to the character of the treatment instituted and as to its duration. The treatment of tuberculosis should be directed to this early period, resulting in the cure of the disease and the restoring of the patient to usefulness rather than to the late period when often the best results obtainable produce only in the prolongation of life accompanied by a reduction in efficiency and a condition of semi-invalidism. Regardless of the fact that we are able to diagnose the disease early and restore nearly all of those suffering from early tuberculosis to usefulness, it is an almost universal experience on the part of those who are especially prepared by study and equipment to treat the disease successfully that they find themselves caring largely for advanced cases of tuberculosis. While quite a proportion of such patients can be restored to a clinical healing and economic usefulness, there are many of them who cannot, without some aid from measures directed toward relief of the mechanical hindrance to healing presented by the rigid bony cage. It is our duty to do the best we can, even if a satisfactory result cannot be attained. Consequently, it is not strange that the physician should attempt to devise methods offering the best possible chance for cure or relief to every patient who asks for treatment.

It must be borne in mind that tuberculosis for the most part shows a marked tendency to heal, even in patients with extensive and advanced lesions. Aside from inherited resistance there is a specific resistance due to infections in early life which have healed and also built up during the early stages of clinical activity. This enables patients to overcome extensive processes. There is marked individual difference in reaction toward tuberculosis on the part of different patients. Aside from difference in natural resistance exhibited by different patients, there are certain very important mechanical factors which influence the end result, as mentioned by Eloesser. Tuberculosis is a disease which is naturally asso-

ciated with many compensatory changes within the thoracic cavity—contraction of infected tissue and enlargements of the normal or more nearly normal. If the mediastinum is free and the pleural spaces are not encroached upon by adhesions, or obliterated, healing is greatly facilitated because compensation can take place readily. In this connection, I also wish to point out the importance of a large pericardium, permitting the heart to move readily. It is in instances in which the normal compensation cannot take place between different parts of the diseased lung, or the two lungs, that surgery is particularly indicated. There is some agitation at this time for surgery to take the place of pneumothorax in cases that are now being treated by it. I doubt the wisdom of this. It is an important thing for any patient who has had a destructive process in the lung to preserve as much breathing space as possible. When a resection has once been done the maximum collapse takes place, while the use of pneumothorax permits the lung to expand after healing has been accomplished, with the regaining of a considerable amount of useful tissue.

Until the principles of chest surgery have been well worked out patients should be very carefully chosen and the operation should be one with caution, with due knowledge and regard for the mechanics of the thorax. At present it is still on trial, but if restricted to properly chosen cases and done with a close co-operation of one who understands chest surgery and the clinician who understands pulmonary tuberculosis, it will probably prove to be a very valuable asset to our therapeutic measures. These operations, while apparently simple, require much judgment and a thorough understanding of the mechanics of the chest as well as the disease tuberculosis to be carried out successfully.

**Charles D. Lockwood, M. D.\*** (295 Markham Place, Pasadena)—Little progress was made in the scientific treatment of tuberculosis until the value of physiological rest was recognized and applied in the treatment of this disease. The application of this principle to all forms of the disease marked a distinct advance in treatment. In pulmonary tuberculosis the recognition of the curative value of rest led to the establishment of sanatoria where bodily rest and dietetic treatment could be rigidly enforced. Up to ten years ago the pulmonary form of the disease was regarded as strictly in the domain of internal medicine, and surgical treatment was regarded as wholly unjustifiable.

The first attempt to secure physiological rest by surgical means consisted of strapping the chest wall with adhesive in the manner long and successfully employed in the treatment of acute pleurisy. Physicians have long recognized the value of pleural exudates in the healing of inflammatory conditions in the pleura and lungs. This is nature's way of inducing rest by means of compression and immobilization of the lung. It is only a step from this procedure to the artificial introduction of a compressing medium—nitrogen or air—into the pleural space. The experimental and clinical work of the late J. B.

geles County Medical Society (Pres. 1906-07); Los Angeles Clinical and Pathological Society (Pres. 1923-24); Southern California Med. Society (Pres. 1912-13); Amer. Therapeutic Society (Pres. 1914-15); Mississippi Valley Med. Association (Pres. 1917-19); C. M. A.; A. M. A.; Amer. Climatological and Clinical Association; Amer. Allergic Society; Pacific Interurban Clinical Club; Assn. for the Study of Internal Secretions (Secy. 1917—); Fellow Amer. College of Physicians (Councillor 1916-23; Regent 1923—); Member Amer. Congress on Internal Medicine (Councillor 1916-23); Amer. Pub. Health Assn.; Amer. Sanatorium Assn. (Pres. 1924-25); Local, National and International Associations for the Study and Prevention of Tuberculosis (Director Los Angeles Tuberculosis Assn., 1924—); Eugenics Society of the U. S. of America; Amer. Association for the Advancement of Science. Present Appointments: Regent and Member of the Executive Committee of Amer. College of Physicians; Member of Editorial Council of "Annals of Clinical Medicine," official organ of Amer. College of Physicians; Member of Board of Directors of Los Angeles Tuberculosis Association; Board of Trustees of Otterbein College, Westerville, O. Practice limited to Diseases of the Lungs and Throat since 1901; general practice from 1894 until 1901. Publications: "Pulmonary Tuberculosis," Wm. Wood & Co., 1908; "Muscle Spasm and Degeneration in Intrathoracic Inflammation and Light Touch Palpation," C. V. Mosby Co., St. Louis, 1912; "Tuberculin in Diagnosis and Treatment," C. V. Mosby Co., St. Louis, 1913; "Clinical Tuberculosis," two vols., C. V. Mosby Co. (1st ed. 1917, 2nd ed. 1922); "Symptoms of Visceral Disease," C. V. Mosby Co., 1919 (2nd ed. 1922, 3rd ed. 1925); "Tuberculosis and How to Combat It," C. V. Mosby Co., 1921. More than 200 papers in periodic medical publications.

\* For bibliography data see May, 1926, issue, California and Western Medicine, page 642.



Murphy placed the method of pneumothorax in pulmonary tuberculosis upon a secure basis.

Combined with bodily rest and sanitarium treatment, pneumothorax has been the accepted method of treating this form of the disease up to a comparatively recent time. Pneumothorax, while a minor surgical procedure, has been left in the hands of the physician and tuberculosis specialist, as pointed out by Eloesser. It has been found that a large percentage of patients are not amenable to pneumothorax because of adhesions. These are the most advanced and hopeless ones. Although a strong tendency to fibrosis most favorable to the healing of tuberculosis cavities exists, in such patients dense bands of adhesions tie the lung to the inner chest wall and prevent the contraction necessary to lung collapse and healing cavities. These constitute the long, drawn-out fatal cases of pulmonary tuberculosis.

It is surprising that the value of surgery was not long ago recognized for this type of patient. The obvious thing is to divide the bands of adhesions if they are well defined and few in number, thus releasing the lung and allowing nature's method of healing to continue. This operation is called "pneumolysis" and may be done by rib resection under local anesthesia with little danger to the patient. It has also been done by Jacobaeus by means of a special instrument which punctures the chest wall and enables the operator to divide the adhesions under direct vision.

Patients with more extensive adhesions associated with abscesses in the upper lobe and with comparatively sound lungs upon the opposite side constitute the most serious and fatal group. It is in this group, however, that surgery is attaining its most brilliant successes. Here multiple rib resection, i. e., extra pleural thoracoplasty, accomplishes what nature does in favorable cases and what the less serious surgical procedure of pneumolysis and pneumothorax do in suitable cases.

All of these procedures conform to the same law operative in the healing of a tuberculous lung, i. e., rest. Thoracoplasty allows the chest wall to fall in and compress the diseased lung, thus putting it at rest and emptying the abscesses in the central portion of the lung of pus and toxic debris.

There is but one consideration that deters the surgeon in the full employment of thoracoplasty, and that is the deforming effect of such extensive rib resections. It should be employed only in well selected cases where other conservative and less deforming methods have failed. It is my belief, however, that with increasing knowledge on the part of the tuberculosis specialist in the selection of cases and improved technique on the part of the surgeon, the indications for surgical treatment will be greatly enlarged and that physicians will learn to distinguish early the type of case that inevitably goes on to a fatal termination and which by early surgery might be arrested.

**Philip H. Pierson, M.D.\*** (490 Post Street, San Francisco) — Surgical intervention in pulmonary tuberculosis is indicated naturally only in those in-

stances where careful, thorough and scientific medical care has been tried and found to offer the patient no further hope of a cure, or arrest, of his disease. It is justifiable in this selected group when the patient's condition warrants the surgical procedure, and when this offers a reasonable hope for arrestment, or cure, of his disease.

This can be accomplished in a few instances by splints, or sand bags, or posture, which I will not discuss further, but much more frequently by lung collapse. An early recognition of this outlook will lead us to institute artificial pneumothorax while it is still possible, few or no adhesions being present. If pneumothorax accomplishes the collapse of the cavity or sufficient of the diseased area to relieve toxicity and favor fibrosis, we have accomplished our aim. In other words, I think our criterion of success or failure must be largely clinical rather than radiological. If our collapse has left undone that which we set out to do, or if because of adhesions no collapse was possible, surgery should be considered seriously. I need not mention lobectomy or ligation of branches of the pulmonary artery, for they carry a mortality which has excluded their use at any rate in tuberculosis. Extrapleural thoracoplasty and evulsion of the phrenic nerve have proved of great value to many patients with unilateral tuberculosis and cavitation where pneumothorax was impossible.

In conclusion let me say that the earlier recognition of patients who should be treated by pneumothorax will allow this procedure to be done satisfactorily because adhesions will not prevent. Our degree of cure, or arrest, by pneumothorax should be determined by the patient's condition, sputum, temperature, weight and ability to work, etc., rather than the x-ray appearance of a lung partially collapsed. Thoracoplasty in those patients in whom pneumothorax has been tried and failed, and whose condition is still good, often brings relief and cure—a status that otherwise would have been denied our patient.

**Dow H. Ransom, M. D.\*** (Madera, California) — Chest surgery for the relief of pulmonary tuberculosis, while necessarily considered under several heads, has for its objective, rest of the lung. I will lay stress on only one of the surgical procedures,

Board, World War. Present Hospital Connections: Chief of Chest Clinic, Stanford Medical School and Hospital. Scientific Organizations: San Francisco County Medical Society; C. M. A.; A. M. A.; California Academy of Medicine. Present Appointments: Associate Clinical Professor at Stanford, teaching tuberculosis; appointment in U. S. Army Reserve pending. Practice limited to Internal Medicine, particularly Diseases of the Chest, since 1915. Publications: Chapter, Diseases of the Lungs, George Blumer Edition of Billings-Forchheimer's *Therapeutics of Internal Diseases*; "Post Influenzal Lung Conditions," M. Clin. N. Amer.; "Adequate Institutional Care of the Tuberculous," California State J. M.; "Tortula in Man," Boston M. and S. J.; "Basal Metabolic Rate in Tuberculous Women," Am. Rev. Tuberc.; "Hemoptysis in Children," Arch. Pediat.; "Tuberculosis of the Eyes," California State J. M.; "The Interrelationship of Asthma and Tuberculosis," Calif. State J. M.; "Healed Generalized Military Tuberculosis," Am. Rev. Tuberc.; "Spontaneous Pneumothorax," California State J. Med.

\* Ransom, Dow Harvey (107 South D Street, Madera). M. D. Cooper Medical College, 1907. Graduate Study: Internship St. Luke's Hospital, San Francisco. Previous Honors: Lt. M. C., U. S. A., 1918. Present Hospital Connections: Proprietor and Manager Madera Sanitarium. Present Scientific Organizations: Fresno County Medical Society; C. M. A.; A. M. A. Practice limited to Surgery since 1920.

\* Philip H. Pierson (490 Post Street, San Francisco). M. D. Harvard, 1913; B. A. Yale, 1908. Graduate Study: House Officer, Massachusetts General Hospital; Good Samaritan Hospital, Brookline, Mass.; Clifton Springs Sanitarium, New York. Previous Honors: Member Draft

namely, induction of artificial pneumothorax—its indications, contraindications, and dangers.

It finds its application to a great extent in neglected patients. By neglected I mean patients in whom the disease probably could have been arrested by early and prolonged medical treatment. As the great mass of tuberculous patients are neglected in the early stage of the disease, and will be for many years to come, any procedure which will assist medical treatment will be welcomed by the phthisiologist. All active cases should be under the care and supervision of a medical specialist. Patients who have yielded the best results under artificial pneumothorax induction are (a) those who have failed to respond to medical treatment; (b) those with pulmonary hemorrhage. In this condition it often gives spectacular results; (c) those with pleuritic effusion which does not respond to rest, and the usual remedial measures are usually improved by aspirating part of the fluid and admitting an equal volume of nitrogen. This may be repeated at intervals of one or two months for a year or two; (d) in the early fibrous type of tuberculous lung artificial pneumothorax gives excellent results; (e) in general, there is "all to gain and nothing to lose" in applying it where medical treatment is not checking the disease. This is especially true of unilateral lung involvement.

Pneumothorax is manifestly contraindicated where serious complications exist, such as advanced cardiac disease, nephritis (either acute or chronic), decided displacement of the heart, dyspnea, chronic alcoholism, rapidly acute cases, those with extensive tuberculosis outside of the respiratory organs, those with advanced bilateral involvement, emphysema, and in the aged. Its field of usefulness is, however, being broadened year by year.

Regarding the dangers of introducing gas or air into the pleural cavity, a mere mention of a few of them will suffice to show that they are more theoretical than real. Injury of the lung, gas embolism, and pleural shock can usually be avoided by careful and skilful technique. Infection of the pleural sac should never occur under modern aseptic technique. Practically all accidents in this operation may be avoided by performing it only with suitable facilities and under favorable surroundings.

**W. C. Shipley, M. D.\*** (Cloverdale Hospital, Cloverdale)—My experience with surgical intervention in pulmonary tuberculosis is not extensive enough to warrant my discussing the subject. During the past decade I have sent two patients to sanatoria for treatment upon whom artificial pneumothorax was tried. Both patients died.

**Robert A. Peers, M. D.\*** (Colfax, California)—Tuberculosis is a very strange disease, and the

reaction of the individual human being to infection by the tubercle bacillus cannot in any way be predicted. The disease varies with individual patients in the manner of its onset, in the signs and symptoms which accompany its course after the disease has once become established and in the results obtained once treatment is commenced. There are two particulars in which no physician, however wide his experience, can enlighten the patient who comes to him for treatment: (a) He cannot tell whether the individual patient will recover or not; (b) he cannot tell how long a time will elapse before recovery or before death intervenes in those patients in whom treatment is unsuccessful. These two statements hold good no matter how mild the infection may appear or how limited the extent of the disease may be.

Patients may be divided into three classes in respect to the manner of their reaction to the presence of active tuberculosis: (1) A small group who apparently recover from the disease irrespective of the extent of their lesion and, sometimes, seemingly irrespective of the method of treatment employed; (2) another small group whose disease progresses irrespective of the best of care and in spite of early diagnosis; and (3) the larger group composed of individuals who will get well or die whether or not they receive treatment early and whether or not treatment is prolonged.

As intimated above, there is no instrument of precision by which any physician is able to judge how the individual patient will react to his disease and to treatment. There is, however, one thing that we do definitely know; and that is that the two most important factors in the cure of tuberculosis are rest and time. We also know pretty definitely that artificial pneumothorax is a tremendous aid in treatment in certain carefully selected patients and that many who would die if given medical treatment alone recover their health and usefulness as a result of pneumothorax treatment. It must be remembered, however, that once pneumothorax is commenced the lung compression must be kept up for a long period of time and that the patient is tied to a physician and, for a number of years, is no longer a free agent able to go and come as he pleases.

We also have sufficient evidence to make us feel reasonably certain that thoracoplasty in very carefully selected patients and operated on by surgeons of good judgment and skill will prolong the lives and in many cases restore to health individuals who, because of certain mechanical difficulties, are not suitable for a pneumothorax compression.

There is no doubt in my mind that artificial pneumothorax and thoracoplasty are wonderful agents for good in the treatment of certain types of tuberculosis. Bearing in mind, however, that no one is able to predict the course of the disease in the individual patient and knowing that certain individuals with extensive lesions and extremely bad prognosis overcome their disease without resort to surgical measures, it is my belief that medical treatment should always first be tried for patients with pulmonary tuberculosis. Only when the disease continues progressive in spite of rest and other appropriate regimen, should surgical intervention be considered. Artificial pneumothorax is a very simple measure when no extensive adhesions exist. Even

\* Shipley, William C. (Cloverdale, California). M. D. California Medical College, 1909. General practice. Hospital connections: Owner and director of Cloverdale Hospital. Scientific organizations: Member Sonoma County Medical Society, Pacific Association R. R. Surgeons, American Association R. R. Surgeons.

\* Peers, Robert A. (Colfax, California). M. D., C. M. Trinity University, Toronto, 1899. Fellow of Trinity Medical College, 1899. Practice limited to tuberculosis since 1909. Hospital connections: Medical Director, Colfax School for the Tuberculous, Colfax, California. Appointments: Member of the California State Board of Health. Scientific organizations: County, State and A. M. A.; County, State and National Tuberculosis Association; Fellow American College of Physicians.

where only partial collapse is obtainable the results are sometimes very remarkable. But the reaction of the patient to pneumothorax is also something which cannot be predicted. But in spite of this uncertainty I believe that patients who are doing badly under ordinary treatment, except those with advanced bilateral lesions, should be given the benefit of artificial pneumothorax. In fact even some patients with extensive bilateral lesions respond favorably to the treatment. I have under my care at the present time a patient with advanced tuberculosis of both lungs with extensive cavitation of both apices where partial compression of both lungs had produced very marked improvement in the patient's condition.

The remarks regarding artificial pneumothorax apply largely to the operation of thoracoplasty except that here one has to be more careful in the selection of his patients and he ordinarily has to deal with those with a more unfavorable prognosis.

In conclusion, the most important factor in influencing the physician or surgeon in attempting surgical measures for the relief and cure of pulmonary tuberculosis is that those patients for whom these measures are particularly indicated are individuals who would otherwise die if they were not given the benefit of surgery. Every patient restored to health by surgery is a life saved; while those who fail to recover have not been harmed, as they would have died had surgical intervention not been attempted.

**E. Rosencrantz, M. D.** (San Francisco Hospital)—Those who have had a wide experience with pulmonary tuberculosis must be impressed with the inadequate methods available for a cure in a large proportion of patients with early and moderately advanced lesions, and also with the utter hopelessness of many with advanced lesions. In making this statement I bear in mind that the first two types of patients may do remarkably well while kept in bed constantly in the open air and under medical supervision in a sanatorium. However, let those patients go out into the world and live the ordinary life of a man or woman free from pulmonary tuberculosis and, in spite of the vast improvement previously made, they very often soon break down and return far worse off than when they left the sanatorium.

In surgery of the chest we have a very definite adjunct to the cure of pulmonary tuberculosis, although its usefulness is limited to a comparatively few patients; this is largely because most of the patients when diagnosed already have bilateral lesions. Artificial pneumothorax should be used only if the patient does not respond to the ordinary hygienic modern sanatorium treatment. At least there should be six weeks of observation before the operation is performed. The procedure is most useful in checking large and persistent haemoptysis when one is sure of the source of the hemorrhage. It was for such a condition that the operation was first performed by Cayley of England in 1885.

There are two disadvantages of the treatment: (a) The long time it takes for the repeated refills covers from eighteen months to two years, and the permanence or otherwise of the results depends upon the after care, as well as on patients not operated on; (b) according to Rist of the Laennec Hospital, Paris, effusion develops in 50 per cent of the pa-

tients, and the hydro-pneumothorax thus caused is a very difficult condition to cure. Osler believed this was due to an injury to the lung during the operation.

The usefulness of thoracoplasty cannot be overestimated in the cases of tuberculous pyopneumothorax. There is no other method by which pus in such a pathological condition can be permanently removed. The results are most spectacular and remarkable. In a patient running a septic temperature as high as 103 to 104 every evening for many weeks, the temperature may drop to normal immediately following the first stage of the operation in an almost dramatic manner. It remains so throughout, unless there is an interference with the drainage. The general condition of the patient improves uninterruptedly, this of course depending upon the general care and open-air treatment. No one who has followed such a patient before or after the operation could possibly doubt the efficacy of the treatment.

In none of the cases have the patients objected because of the deformity of the chest following the operation. This can hardly be considered when compared to the satisfactory results obtained.

**Joseph W. Cook, M. D.** (Banning, California)—It is with a certain degree of hesitation that I discuss this question, but as against my comparative lack of experience my interest in pulmonary tuberculosis from the point of view of a patient encourages me to raise a few questions.

Does surgical treatment of pulmonary tuberculosis cure?

I find this definite statement by Lambert and Miller in concluding a recent paper: "Cases so operated upon still have their tuberculosis and must undergo prolonged after-treatment along approved methods of treatment of that disease, especially rest," and Lilienthal adds, "The surgeon must never lose sight of the fact that, although the wound may heal and his immediate objective be reached, his patient still has tuberculosis and will long require medical and hygienic treatment."

Amberson concluded his paper on thoracoplasty in tuberculosis, "like pneumothorax, thoracoplasty in itself does not remove the tuberculosis. The surgeon sets the stage for better healing, and then, under the supervision of the physician, the patient continues hygienic rest treatment until such healing is attained. To neglect this is to thwart the possible good effect of surgery."

Several years ago a doctor who himself was using pneumothorax extensively began to have serious hemorrhages. Pottenger and Browning saw him with me. Pneumothorax was suggested, but the doctor in utter dismay refused it and shortly thereafter died. Possibly this occurrence has led me to think too much of the human side of the patient and to consider his feelings. These attributed feelings are of course influenced by my own, and I question most emphatically if I should myself be willing to submit to either pneumothorax or thoracoplasty.

Does surgical intervention not increase the patient's dependence upon doctors and therefore put this slight hope beyond the reach of all but a small minority of tubercular patients? As Peers so well says, "It must be remembered that once pneumo-



thorax is commenced, the lung compression must be kept up for a long period of time and that the patient is tied to a physician, and for a number of years is no longer a free agent to go and come as he pleases." This statement is almost condemnatory, especially as he continues, "No one is able to predict the course of the disease in the individual patient. Certain individuals with extensive lesions and extremely bad prognosis overcome their disease without resort to surgical measures."

Is this form of treatment so popular in certain quarters because of a hopeless attitude toward tuberculosis in general?

In our desire to restore our patients to normal state, have we not become obsessed with a desire to recreate new lungs and, failing in this, have we not become oppressed with hopelessness and turned to attempted obliteration of the lung insofar as we dare?

In spite of all this some patients are restored to a certain degree of economic cure, but without this despairing surgery many are likewise restored.

If Calmette's statement is correct that one-sixth of the total volume of the lungs is sufficient to sustain life, are we not justified in changing our attitude somewhat toward our patients? Can we not stop thinking of our patients only in terms of lungs, cavities, râles, and areas involved, and while recognizing our patients' dependence on their lung condition, ask not how good or how bad the lungs are, but will they do the work?

Granting as I do the value of pneumothorax and thoracoplasty in some well-selected cases, I appeal for more consideration for the patient as an individual, rather than as a case. He is more than a pair of lungs, one of which is diseased and must be obliterated. With his limited lung capacity he may live a longer and more useful life than the surgeon—possibly a shorter life, but none the less useful. Instead of welding patients to ourselves with chains of surgical dependence, let us first in every other possible way endeavor to pry our patients loose from us and set them free to face again the world free men and economic cures. "Idealism," said a patient of mine not long ago, "is the only cure for tuberculosis." Awaken hope and idealism in even an advanced case and rehabilitation may be accomplished, not always because of the unknown mysterious factors involved in life, but then, too, only a small percentage of surgically treated patients get well. Swezey and Schonbar, in the February number of the *American Review of Tuberculosis*, say of pneumothorax: "While the balance of evidence seem to be slightly in favor of this treatment, yet, considering the frequency of complications resulting from this treatment in such cases, it is probably best not to be too optimistic about it unless the treatment becomes imperative for the purpose of controlling hemorrhage."

But after due consideration of all factors and proper consideration of the patient and all it implies to him we decide on surgical treatment, then I have nothing to say to the patient except, "It is the best we can do and we trust it is best for you."

**Cancer, Vitamin Imbalance and Roentgen-Ray Activity**—Further report is made by Montrose T. Burrows, Louis H. Jorstad and Edwin C. Ernst, St. Louis (*Journal A. M. A.*), on their experiments dealing with the rela-

tionship in an etiologic way of certain dietary constituents and cancer. In the light of these studies, cancer is only the result of anything that leads to an excessive production of vitamin B or removes the vitamin A or growth inhibitor from small areas of tissue in the body. Roentgen rays act only to increase the vitamin B content in the tissues. In the proper dosage, therefore, it may produce cancer as it may through the excessive production of vitamin B destroy cancer. Cancer is only the result of a vitamin imbalance. Normal life depends on a proper balance between vitamins A and B. The problem of the cure of cancer is the restoration of this balance. The problem of the prevention of cancer is the prevention of such imbalances taking place. Roentgen rays act on the organism to produce vitamin B. Larger doses of these rays lead to the liberation of larger amounts of vitamin B with a secondary production of vitamin A. These larger doses of roentgen rays lead always to an early exhaustion of the ray, while larger doses repeated over long intervals do not cause this early exhaustion. The roentgen ray becomes important in the cure of cancer in that it liberates an excess of the archusia or vitamin B from the cells when given in the proper doses. As must be noted the cancerous tissue contains already a high content ( $S^3$ ) of the archusia. Only a slight stimulation is sufficient to increase this amount to a value of  $S^4$  which causes the cells to degenerate. The normal tissue contains much less archusia. The same dose acting on them may not even cause them to grow. The first problem for the advance of roentgen-ray therapy is a proper and well-controlled dosage. The second problem is to produce the proper reaction in the surrounding normal tissues. Too great a dose on these tissues must cause a decrease in blood supply and make them more favorable for the spread of the cancer. The prevention of this spread of the cancer is the protection of the blood vascular system in these regions. As shown above, the vascular system is only the path of the inflow of the vitamins from without. It is maintained through a proper balance of vitamins A and B. The progress in roentgen-ray therapy, as is evident from these studies, will come first through the establishment of a uniform method of measuring (one of us has undertaken and instituted methods for such procedure), and the establishment of proper dietary and nutritional conditions in the patient before such therapy is instituted.

#### **Etiology and Treatment of Pernicious Anemia—**

Though the causes of pernicious anemia are not yet fully known, clues to their nature are being obtained. In any consideration of etiology, Lewellys F. Barker, Baltimore (*Journal A. M. A.*), says due attention should be paid to the peculiarities of incidence and distribution of the disease; to the fact that it is predominantly a malady of middle and later life; to the characteristic features of the blood picture and their relations to blood destruction within phagocytes and to blood regeneration of embryonal type; to the associated disturbances of the digestive, nervous and endocrine systems; to certain special marks in the bodily configuration; to the occurrence of spontaneous and of therapeutically inducible remissions of variable duration, and to the inevitability, in the present state of knowledge, of a fatal termination. Of the many conceptions of etiology that have been advanced, the evidence at present favors hereditary (genotypic) predisposition as the main factor and various influences in the external conditions (especially poisons derived from bacteria, fungi or animal parasites in the digestive tract) as accessory releasing or provocative factors. Parallel with the growth of hypotheses of etiology, conceptions of pathogenesis are being extended; the causes of the disturbances of equilibrium between blood destruction and blood regeneration (and their antecedents) are becoming clearer; the anemia is recognized as only one part of a comprehensive disease entity in which the digestive system, the nervous system, and the endocrine system are also involved, and investigators are now striving to establish correlatives among the various phenomena observable and to find the precise place in the malady as a whole that should be assigned each integral part. Treatment of the disease though not curative is rewarding.

### FURTHER ATTEMPTS TO CONTROL DOCTORS BY FEDERAL BUREAUS

Being a transcript of the evidence of W. C. Woodward, executive secretary of the Bureau of Legal Medicine and Legislation, A. M. A., given before the committee of Congress in hearings on bills designed by the Treasury Department to strengthen the Harrison Narcotic Law.

*Mr. Editor*—Notwithstanding the intimations of the Supreme Court that certain features of the Harrison Narcotic Act might be in danger if presented in proper form before the court, the federal bureau charged with the enforcement of the act attempted to have Congress give them even greater power to regulate the practice of medicine.

The report of the hearings before the Committee of the House of Representatives on May 21, 22, and 26, 1926, is interesting reading to every physician as indicative of the attitude of the tax-collecting bureau of our government in medical matters.

William C. Woodward of the A. M. A. appeared before the committee and gave testimony which so well represents the position of physicians that it is published in full.

The report, which may be obtained from the government printing office, contains much other important evidence and, in view of the certainty that the subject will be before our legislature this winter, persons interested should study the complete report:

#### STATEMENT OF DR. WILLIAM C. WOODWARD, CHICAGO, ILLINOIS, REPRESENTING THE AMERICAN MEDICAL ASSOCIATION

*Mr. HADLEY*—You may state your name and whom you represent.

*DOCTOR WOODWARD*—My name is William C. Woodward of Chicago, Illinois. I represent the American Medical Association.

*Mr. HADLEY*—What is your relation to the Association?

*DOCTOR WOODWARD*—I am the executive secretary, as they term it, of the Bureau of Legal Medicine and Legislation.

*Mr. HADLEY*—Very well. Proceed.

*DOCTOR WOODWARD*—I think it would be well to get a background of this pending legislation, in order to determine its possible effect on future court decisions. Serious doubt has been cast on the constitutionality of the Harrison Narcotic Act, even in its present form. The Supreme Court of the United States, on January 4, 1926, in *United States v. Daugherty*, said:

The constitutionality of the antinarcotic act, touching which this court so sharply divided in *United States v. Doremus* (249 U. S. 86), was not raised below and has not been again considered. The doctrine approved in *Hammer v. Dagenhart* (247 U. S. 251); *Child Labor Tax case* (259 U. S. 20); *Hill v. Wallace* (259 U. S. 44, 67); and *Linder v. United States* (268 U. S. 5) may necessitate a review of that question if hereafter properly presented.

The constitutionality of the act was passed on in the *Doremus* case (249 U. S. 86), decided March 3, 1919, and the act was held to be constitutional by a majority opinion; but the report notes:

The chief justice dissents, because he is of opinion that the court below correctly held the act of Congress, insofar as it embraced the matters complained of, to be beyond the constitutional power of Congress to enact, because to such extent the statute was a mere attempt by Congress to exert a power not delegated; that is, the reserved police power of the state.

In that dissenting opinion Justices McKenna, Van Devanter, and McReynolds concurred. That particular case turned on the question of whether a physician who prescribed narcotics in excessive quantities for a drug addict was prescribing in the course of his professional practice. As you can see, the courts regard that as, at least, a very doubtful question. If we add further restrictions, such as are proposed here, in the nature of police regulations, I think it is only pushing the act a little further toward the brink of the grave.

The child labor tax case is of extreme interest at the present moment, the child labor law being analogous to the Harrison Narcotic Act in that Congress undertook to regulate child labor in the several states by imposing a tax on those who employed such labor.

*Mr. CROWTHER*—That has been declared unconstitutional.

*DOCTOR WOODWARD*—That has been declared unconstitutional.

*Mr. CROWTHER*—Is it analogous?

*DOCTOR WOODWARD*—It is analogous, and the case in which the child labor law was declared unconstitutional is referred to by the Supreme Court as one of the cases that may lead the court to revise its decision as to the constitutionality of the Harrison Narcotic Act. In the course of the opinion in the child labor tax case the court said:

Does this law impose a tax with only that incidental restraint and regulation which in fact must inevitably involve? Or does it regulate by the use of the so-called tax as a penalty? If a tax, it is clearly an excise. If it were an excise on a commodity or other thing of value we might not be permitted, under previous decisions of this court, to infer solely from its heavy burden that the act intends a prohibition instead of a tax. But this act does more. It provides a heavy exaction for a departure from a detailed and specified course of conduct in business.

*Mr. HADLEY*—What case is that from?

*DOCTOR WOODWARD*—That is the child labor case (259 U. S. 20) decided March 15, 1922.

Grant the validity of this law, and all that Congress would have to do hereafter, in seeking to take over to its control any one of the great number of subjects of public interest, jurisdiction of which the state have never parted with, and which are reserved to them by the tenth amendment, would be to enact a detailed measure of complete regulation of the subject and enforce it by a so-called tax upon departures from it. To give such magic to the word "tax" would be to break down all constitutional limitation of the powers of Congress and completely wipe out the sovereignty of the state.

*Mr. HADLEY*—Is that last paragraph you just read analogous in principle to the one involved here?

*DOCTOR WOODWARD*—Exactly. The proposition of the Harrison Narcotic Act at the present time is simply that it is imposing a certain tax and adding certain regulations to that tax.

*Mr. HADLEY*—I had in mind whether Congress might not possess some other constitutional power under which we can proceed to regulate in that way, regardless of the jurisdiction of the states.

*DOCTOR WOODWARD*—There is no other constitutional power, and the further we go toward regulation the further we are going to jeopardize the act. And I think all of us will agree that it is desirable that nothing be done that will jeopardize the act. I am only pointing these things out to indicate that we should be cautious lest we go too far.

Now, coming to the bill itself. We have the provision on page 2, lines 1 to 9, relative to prohibition of registration to narcotic addicts.

*Mr. FAUST*—That applies to doctors?

*DOCTOR WOODWARD*—It applies to doctors, dentists, wholesale dealers, and registrants generally. I think it has been definitely decided in *Starnes v. Rose*, referred to here yesterday, that the present law does not authorize a Commissioner of Internal Revenue to refuse registration to anyone who is entitled by law of the state to deal in all the several drugs that call for registration, either the manufacturer, the dealer in drugs, wholesale or retail, or the prescriber. That is clearly a state function. In that case (282 Fed. 336), decided by the District Court of the Northern District of Georgia on July 21, 1922, the court said:

The act is not a licensing act whose aim is to control the dispensing of narcotics by confining their dispensation to proper persons, for that is an exercise of police power not possessed as to opiates by Congress. The act rests on the power to tax, and its provisions for registration and its restrictions upon the dispensation of narcotics are for the purpose of safeguarding the tax on the dispenser and on the drug.

Further the court goes on to say:

But to prohibit a practicing physician from prescribing narcotics unless he registers, and then to refuse to register him, would to that extent be to prohibit or regulate his practice of medicine, being within the province of the

state and not of the United States, and in contradiction of the revenue purposes of the act.

And further on:

To determine who may properly practice medicine and otherwise dispense drugs belongs to the agencies of the state.

To the same effect substantially is the case of *Linder v. United States*, in the United States Supreme Court, decided April 13, 1925, wherein the court said in part:

The declared object of the narcotic law is to provide revenue, and this court has held that whatever additional moral ends it may have in view must be reached only through a revenue measure and within the limits of a revenue measure.

The court here cites *United States v. Jin Fuey Moy* (241 U. S. 394). And further on the court says:

Congress cannot, under the pretense of executing delegated power, pass laws for the accomplishment of objects not intrusted to the Federal Government. And we accept as established doctrine that any provision of an act of Congress ostensibly enacted under the power granted by the Constitution, not naturally and reasonably adapted to the effective exercise of such power, but solely to the achievement of something plainly within the power reserved to the states, is invalid and cannot be enforced.

MR. HADLEY—What subject had the court under review there?

DOCTOR WOODWARD—That was a case of a physician in the state of Washington, in Spokane, who had given a narcotic addict four tablets, as I recall it, one of one-fourth grain of morphine and three of cocaine. The addict, a woman, had been sent to the physician by narcotic agents. She pretended to have pains in her abdomen and that sort of thing. The physician gave her from his own supplies these four tablets. Thereupon he was charged with having violated the narcotic act. He carried the case to the United States Supreme Court, and the Supreme Court held he had a right to do what he did do.

MR. CROWTHER—They were trying to make a case when they sent the woman there?

DOCTOR WOODWARD—They were trying to make a case. Further on the court says:

Obviously direct control of medical practice in the states is beyond the power of the Federal Government.

These are very clear reasons, it seems to me, why Congress cannot undertake to say that a license shall be refused to a physician who is a narcotic addict. That, however, does not leave the Federal Government helpless, because the states themselves have already in most cases cared for the situation. Already twenty-nine states and three territories have on their statute books specific provisions that authorize the revocation of the license of a physician if he is a narcotic addict. Some cases provide that he must be a narcotic addict to a sufficient extent to interfere with his practice of medicine. In other states there is no specific provision providing for the revocation of the license of a physician because he is a narcotic addict, but there are provisions authorizing the revocation if he is guilty of unprofessional conduct, which I believe, in many cases at least, would cover the situation.

I am told that the records in the narcotic division with reference to the prevalence of narcotic addicts among physicians are confidential records; that the narcotic division does not feel under any obligations to bring these cases to the attention of state medical examining boards, and in support of that attitude I am cited to a regulation of the Secretary of the Treasury applying to the records of the department generally, that forbids the giving of any information except with the consent of the Commissioner of Internal Revenue. Of course, in a case of that kind, the commissioner could give the consent or the Secretary of the Treasury could very readily amend that regulation. It would take some time on the part of the narcotic officers of the Government to develop these cases before these medical licensing boards, but I think that such work is part of their duty. If you can eliminate these doctors, by all means do it.

But a partial elimination is worse than none. To say to a physician who is known to be a narcotic addict: "You may not register under the Harrison Narcotic Act and, therefore, you may not prescribe narcotics for your patients," leaves him to obtain his own supply from the underworld, as he certainly will. It leaves him, furthermore, to practice among his patients, seriously handi-

capped because he cannot use, for their benefit, a very essential lot of drugs—the narcotics. This would in the end render the situation worse than if the physician were registered.

Furthermore, if the physician is not allowed to register under the Harrison Narcotic Act, the Federal Government has no jurisdiction over him, with respect to the matter of prescribing narcotics. The only way the Federal Government obtains jurisdiction is by taxing him. In the case of the *United States v. Jin Fuey Moy* (241 U. S. 394), decided June 5, 1916, it was held that the possession of narcotic drugs by an addict who was not within any of the classes required to register was not evidence of any violation of any law on his part. The law being a tax law, it applies only to the persons who are required to pay the tax and to register. By refusing them registration, you would be putting the men whom you desire to control beyond your control.

I may safely say that physicians regard this proposed elimination of narcotic addicts in this way as unwise. The physicians regard as wise and proper the total elimination of those men from medical practice in the ordinary channels.

MR. DICKINSON—By the states?

DOCTOR WOODWARD—By the states, and there are already twenty-nine states and three territories that cover the situation by their laws.

MR. CROWTHER—When a state finds a man has been prosecuted by the Federal Government and found guilty of dispensing narcotics to an addict, does the state medical society take action to annul his license?

DOCTOR WOODWARD—The state medical society does not take the initiative in those cases.

MR. CROWTHER—I mean the licensing board of the state.

DOCTOR WOODWARD—I think they have done it only occasionally, because they have no evidence. Of course, the conviction would be a matter of record, but knowing the state medical examining boards as I do, I feel sure they seldom get official notice of a conviction. My recollection is that in Iowa, under some recent legislation, it is made the duty of the prosecuting attorney to bring such conviction to the attention of the board, with a view to the revocation of the defendant's license.

MR. HADLEY—The machinery could very easily be perfected so as to require that kind of showing before the state authorities.

DOCTOR WOODWARD—Yes, sir.

MR. CROWTHER—Does the Federal Government, when they run across a case of that kind, make a report to the licensing board of the state? Do they submit any evidence to them that a certain physician is an improper person to practice medicine?

MR. TENNYSON—No, sir. We do not consider we have authority. If it is a matter of conviction, it is a matter of court records, and those records are as public to those boards as they are to us.

MR. CROWTHER—But if they are not looking for them, they will not find them. It seems to me, when there are convictions, the Government should send copies of the record to the state licensing boards and give them an opportunity to bar them from practice.

MR. TENNYSON—We would gladly do that, if we can do it.

DOCTOR WOODWARD—I have a letter here on the subject, if you care to have it read.

MR. CROWTHER—Do you not think it would be a good thing to notify the licensing boards of the states of convictions?

DOCTOR WOODWARD—I think it would be time well spent.

Another feature of the proposed refusal to register addicts is the determination as to what is an addict, and how the determination is to be made. It is provided here very definitely that:

Any person addicted to the habitual use of opium or cocoa leaves, or any compound, manufacture, salt, derivative, or preparation thereof, when such use is not in the course of professional practice only, shall not be allowed to register under this act.

I am quite sure that phrase "when such use is not in the course of professional practice only" is surplusage, because I cannot conceive of being addicted to the habitual use of narcotics "in the course of his professional practice." I think it is intended to provide that if any person



uses any of the drugs named, habitually, registration will be refused to him. How is the fact to be determined? Will the physician be allowed to be heard? The proposal as it stands seems arbitrary, and it seems to me unwise.

With respect to the next provision in the act, page 2, lines 10 to 14, which provides:

That in addition to any penalty which may be imposed under Section 9 hereof, any person hereafter convicted of a violation of this act shall not be granted registration under this act for a period of one year from the first day of July next following the date of such conviction.

In this particular case you are applying a rather severe penalty to what may be a very minor infraction of the law. A physician is required to renew his registration not later than June 30 of each year. He may forget it and prescribe narcotic drugs for two or three days. He has violated the law. If he is convicted he is put in the same position with respect to revocation of his registration as the most persistent convicted dope peddler is. This provision is arbitrary and unreasonable and calls for an excessive punishment.

The punishment is excessive in a way that does not appear on the surface. If a physician is convicted of a violation of the Harrison Narcotic Act, he suffers not only as to the fine he is called on to pay, but he loses to a certain extent his reputation and his practice. It is very hard to dissociate conviction under the Harrison Narcotic Act from the peddling of dope. A man may live it down, but under the provision here proposed a man for a minor infraction of the law must go on for a year or two without the right to prescribe narcotics. His patients suffer, and every time he is asked why he cannot relieve them it becomes known that he is a man who has in some way violated the Harrison Narcotic Act.

MR. CROWTHER—If he needed narcotics he could get them.

DOCTOR WOODWARD—He would have to call in a consulting physician. Of course, that would not prevent him from continuing his practice. He could keep right on practicing. He would either have to call in a consulting physician if his patients needed narcotics, or he would have to get them from peddlers and dispense them to his patients. He would never do the latter, because that would get him into further trouble. However, when you tell a physician he shall not register, then the United States has no jurisdiction over him except such as it has over persons generally.

Take the cases I referred to, and the principles laid down in the Child Labor Tax case and other cases. When the Federal Government says to a man who is licensed by the state to practice medicine that he may not practice medicine so far as the use of narcotics is concerned, I think beyond question the Federal Government is undertaking to regulate the practice of medicine in the state. It is in a sense saying to the state government: You may license a man to practice medicine, but you may not license this man to practice medicine beyond a certain point.

There is another feature with reference to this withholding of registration that I think makes it particularly obnoxious to the physician, and that is that it will enable the Bureau of Internal Revenue to hold a club over the heads of the physicians to a greater extent than it does at the present time. Most cases against registered persons that are brought to a termination are terminated by compromise. I have taken these figures from the report of the Commissioner of Internal Revenue for the year ending June 30, 1925, page 31. During that year 2254 charges were brought against registered persons. Of that number 1185, or 47.43 per cent, were compromised. The doctor, rather than go into court, losing time and money and his reputation, is perfectly willing to pay and a compromise is effected. Of course, the more serious the case is the more willing he will be to compromise. But how well substantiated are the charges that are brought? You can answer, I think, from the fact that of the 854 cases in which charges were brought and compromises were not effected, 72 per cent were dropped. In 7 out of 10 cases the charges were abandoned. But the mere threat of court prosecution which might involve loss of registration for two years would constitute an enormous club in the hands of the Commissioner of Internal Revenue.

No physician would dare go into court, and we do want the right to test every issue in court, if we must.

Now, we come to the question of ambulatory treatment. The American Medical Association has very definitely taken a stand on the question of ambulatory treatment of narcotic addicts. There are very few narcotic addicts that are permanently cured, whether treated by the ambulatory method or otherwise; but in the case of the ambulatory treatment it is practically impossible to control the situation. The patient will get a certain amount of narcotics from one doctor, and a certain amount from another doctor, under another name. Or when one doctor begins to cut down the supply, he will go to another doctor and get a bigger dose. But the figures that have been given here, I think I may fairly say, are not representative figures. They represent the results of the dispensary treatment, where you get the lowest group in the narcotic world. But to say, as this bill proposes, to this lawyer, or to this government official, or to this doctor, who is earnestly desirous of being cured of his habit, and who for professional or business reasons could not afford very well to go into a narcotic asylum for treatment, that he cannot take treatments while he continues his business, no matter how sincere he may be, is, I believe, going a little far. Furthermore, I do not believe the Federal Government has the right to go into the state and deny any kind of treatment that the state itself may approve.

We have the further possibility, of course, that we may find methods of ambulatory treatment that would be more satisfactory than the present method. If we had an act of Congress that absolutely forbade ambulatory treatment, we would be barred. We could not even try out a new method. I do not believe that, even if you should feel you were justified in forbidding ambulatory treatment, it should be forbidden outright, but as far as you should go would be to provide that if physicians undertake to treat narcotic addicts by ambulatory treatment such physicians should be especially licensed by the Commissioner of Internal Revenue, so there might be some control or supervision of the method. If there were a withdrawal of ambulatory treatment of all narcotic addicts we could not accommodate them in the hospitals and asylums of the country. I do not believe there are enough beds to accommodate them, and I am quite sure that even if there were many that many an addict would be utterly without resources to provide himself with treatment.

As to the matter of keeping records, we stand squarely with the pharmacists, that there is more record keeping now than is productive of results. If you consider how many persons are registered and how many entries that would have to be made every day you will find there would be a mass of documentary evidence that would fill a library every week or two, and that the narcotic division could not possibly make effective use of it, and the burden would fall on the honest and conscientious man who would keep honest records, while the very man whom the Commissioner of Internal Revenue and the narcotic division desire to reach is the man who will falsify his records. We do not believe that any good can be accomplished.

The trouble with these records is that penalties are sometimes imposed for what is certainly not a very serious infraction. I have here a letter under date of March 31, 1926, that I think I may fairly say is a type. I sympathize with Colonel Nutt in having to deal with a very large number of agents in a very large territory who, like the rest of us, are of all classes. I do not know anything about this particular agency, but this is what the letter says:

Recently I was visited by two federal narcotic agents who examined my records. The records were found to be correct, but the narcotic record book was about three weeks behind, although my daybook was up to date. My system is to enter records in my daybook and then copy them to the narcotic record book.

Today I received a letter charging me with failing to keep records as required. (Section 2.)

They give me the privilege under Section 3229 Revised Statutes of tendering voluntarily an offer of compromise. Forms 656 were inclosed.

The agents stated that as the records were behind I should write a letter of explanation. As I was busy and tired I allowed them to dictate the letter. This was the written evidence that they desired. This method is being

worked regularly. It is a dishonest underhanded frame-up to catch doctors who are honestly endeavoring to comply with the law.

That is one case. In another case in Boston there were two physicians in the same office, and both were allowed to compromise by the payment of \$10 each, on the ground they had not kept records of the circumstances and times under which they had made solutions of cocaine crystals. They would buy the crystals in quantity and make up the solutions as they needed them. Under the regulation they are required to keep a record of each individual person to whom they administer or dispense narcotics or to keep a record when they make up the solution. The narcotic agents came in and found that they had not kept a record of the time when they dissolved the crystals. They were allowed to settle by the payment of \$10 each. Trivial annoyances such as these are one of the reasons physicians do not want to keep any more records than are absolutely necessary.

When you come to the matter of supervision by druggists, that is, requiring druggists to pass judgment on each narcotic prescription, I think the situation is simply impossible. The ordinary elementary rule of criminal law is that the law must give a man notice of what he may do and what he may not do. Here is a proposition that a druggist must refuse to fill a prescription, if circumstances are such that from them he might reasonably deduce that the prescription was not issued in the ordinary course of professional practice. It is not necessary that he shall deduce, but if the court finds that he might have deduced, might have reasonably deduced, he has no right to fill the prescription.

MR. HADLEY—But he is to that extent put upon notice or upon inquiry.

DOCTOR WOODWARD—Yes, sir.

MR. HADLEY—And he must determine what the fact is in a reasonable way.

DOCTOR WOODWARD—But this is a criminal statute.

MR. HADLEY—I understand.

DOCTOR WOODWARD—And he has no standard, either as to what constitutes the ordinary course of professional practice, or what constitutes circumstances from which he might reasonably deduce these facts. The Supreme Court and all the courts have never yet been able to say what is the ordinary course of professional practice. This Linder case I spoke of is practically a modification of previous decisions made by the Supreme Court.

MR. DICKINSON—Would you be disposed to leave the law as it is, or would you have suggestions to make or amendments in view of the proposed amendments here?

DOCTOR WOODWARD—I think it is very untimely and unwise to attempt to do anything with the law. I think the more you attempt to do with the law at the present moment, the more likely it is that someone will test it out from a constitutional standpoint. And if that is done, the more rigid the law is, the more it interferes with state regulation, the more apt it will be to be declared unconstitutional.

MR. DICKINSON—What was the name of the Chief Justice who wrote the dissenting opinion you referred to?

DOCTOR WOODWARD—That was Chief Justice White.

MR. HADLEY—What is your general observation as to the operation of the present narcotic law? Are we making fairly good progress or not in the curtailment of the narcotic habit?

DOCTOR WOODWARD—We do not know. I have some figures here. One of the most conservative recent statements is to the effect that we have but 110,000 narcotic addicts. I think that is a conservative estimate. Of course, others have estimated it as high as a million. I think that is quite certainly excessive.

But you are not reaching the question by this proposed legislation. Here is a statement that was issued from the office of the narcotic information bureau, Federal Prohibition Unit, in Washington in 1924:

The smuggling of narcotic drugs constitutes the greatest problem with which the narcotic division has to deal. It is estimated that 90 per cent and perhaps more of the drugs supplied to these addicts is procured through unauthorized channels, dope peddlers, bootleggers, and smugglers.

Do what you will, you are not going to reach that situation by this bill.

MR. HADLEY—Our last legislative effort was along the line of the narcotic control board. Has that worked to advantage?

DOCTOR WOODWARD—I think so. I think we may say very definitely that the operation of the several narcotic control laws has been of advantage. Just how far the Harrison Narcotic Act itself has operated to advantage, I do not know. If I were asked for any suggestion as to procedure, I should say that where we have failed in our duty is in failing to stimulate states to enact effective narcotic laws and to enforce them, because under the Opium Convention of 1912 we assume that duty quite as much as the duty of enacting federal legislation. Article 10 of the convention of 1912 provides:

The contracting parties shall use their best efforts to control or cause to be controlled all those who manufacture, import, sell, distribute, or export morphine or cocaine or their respective salts, as well as the buildings where such persons exercise this industry or commerce.

MR. HADLEY—It was with a view of meeting that obligation that Congress proceeded to enact this law.

DOCTOR WOODWARD—Yes. It seems to me that a more active co-operative campaign is desirable, particularly in view of the jeopardy in which the Harrison Narcotic Act is now placed. Physicians co-operated with pharmacists and others framing a model state narcotic law. We did not get as far along as we desired. At the present time I am now actively co-operating with the committee on narcotic drug legislation of the Conference of Commissioners on Uniform State Laws. They have submitted two reports at the last two annual meetings, and we are hoping to get a law before long that has the approval of the best legal minds in the country.

MR. HADLEY—I understand your position is that under the status of existing federal legislation it is better and wiser to co-operate with the states for supplemental legislation by the respective states on this subject.

DOCTOR WOODWARD—Yes, sir. That is my judgment with respect to the entire subject-matter of this bill.

**Sporadic Meningococcus Meningitis**—Prior to the introduction of serum therapy for sporadic meningococcus meningitis, the mortality of the disease in the first year of life approached 100 per cent. In infants under 1 year of age treated by Stafford McLean and John P. Caffey, New York (Journal A. M. A.), with serum, recovery occurred in approximately 50 per cent. In children between the ages of 1 and 5 years, 85 per cent recovered. The later growth and development of these children with apparent complete recovery from their acute infection is of interest and of considerable importance. The authors have observed forty-four such cases (excepting two patients who died in the first year after discharge from the hospital) over a period varying from one to ten years, and these form the basis of their report. In ninety-seven patients with meningococcus meningitis treated with serum at the Babies' Hospital in the ten-year period from 1916 to 1926, recovery occurred in fifty-nine, or 61 per cent. These cases were all of the sporadic type. The diagnosis in forty cases was proved by finding meningococci in the cerebrospinal fluid. In the remaining four, the diagnosis was made because of the purulent character of the fluid in which no organisms of any variety could be found. The serum used was polyvalent. It was made in the laboratories of the New York State Department of Health, of the Health Department of New York City, or of the Rockefeller Institute. The patients varied in age from 35 days to 4½ years. Follow-up examinations have been made in forty-four of the fifty-nine cases. Twenty-five of these patients have been observed for three years or longer, and in this group fifteen have been under observation from five to ten years after treatment. In the total number of cases followed, thirty, or 69 per cent, presented no abnormalities throughout the period of observation. Nine, or 20 per cent, showed serious sequelae, and death occurred in five, or 11 per cent. Four were cases of deaf-mutism, two of hydrocephalus, two of impaired vision, and one of mental deficiency. The time of occurrence of sequelae suggests the value of early treatment in their prevention.

# EDITORIALS

## LOS ANGELES AND SMALLPOX

In our July issue we said:

"The Public School Protective League"—This is from the letterhead of an organization that solicits funds for the purpose of opposing vaccination and other scientific medical policies. They designate vaccination in Los Angeles as 'A Modern Inquisition.'

Under date of June 29 we have a protest reading in part:

"The Public School Protective League does not solicit funds for the purpose of opposing vaccination or any other scientific medical policy. It functions for the purpose of protecting public schools of the state against the encroachment of enforced physical examinations and vaccination. Its work is to advise parents concerning the laws of the state pertaining to such matters. The League has

no quarrel with any individual or organization desiring vaccination, neither does it attempt at any time to interfere with the physical examination of school children whose parents desire them to have such supervision at public expense.

"The Public School Protective League has at no time designated vaccination in Los Angeles 'A Modern Inquisition.' It did reprint and send out to its membership an article which appeared in The Christian Science Monitor and which was entitled 'A Modern Inquisition.' A copy of this article is enclosed herewith. You will note that the article had to do with the 'Inquisition' methods used by the Health Board in the city of Milwaukee during a so-called epidemic, coercing the public into submitting to vaccination."

The copy of leaflet enclosed follows. It needs no comment:

REYNOLD E. BLIGHT, Los Angeles  
President  
DR. HARRY W. FORBES, Los Angeles  
Vice-President  
MRS. CHAS. H. GODFREY, San Francisco  
Vice-President  
EDMUND J. CALLAWAY, Long Beach  
Director  
MISS MARY S. WILLIAMS, Pasadena  
Director

DOUGLAS L. EDMONDS  
MARSHALL STIMSON  
General Counsel

DR. MAE PARSONS, Los Angeles  
Director  
MISS RUTH STERRY, Los Angeles  
Director  
MRS. HELEN L. PALMER, Los Angeles  
Secretary-Treasurer  
MRS. L. P. BOYCE, San Francisco  
Secretary-Treasurer  
for Northern California

## The Public School Protective League

AN ORGANIZATION HAVING FOR ITS PURPOSE THE PROTECTION OF THE  
PUBLIC SCHOOLS FROM MEDICAL AND ECCLESIASTICAL EXPLOITATION

The Function of the Public School  
Is to Educate—Not to Medicate

714 UNION BANK BUILDING  
325 W. Eighth Street  
Telephone VAndike 9727

It is the School that is  
Public—Not the Child

### A Modern Inquisition

There is a striking similarity between the mode of procedure in the present smallpox situation in Los Angeles and that pursued in Wisconsin during a smallpox experience in that state.

The international newspaper, The Christian Science Monitor, under date of February 18, 1926, published a very strong editorial based on the Milwaukee affair, which the League feels is of special value at this time as bearing on the California problem. The Monitor article is here reprinted in full:

#### A MODERN INQUISITION

Frankness is to be commended as a general thing, but there are not many health officers who dare to be as frank regarding their use of 'fright and pressure' as agencies for promoting the use of their wares as was Dr. John P. Koehler, Commissioner of Health, in Milwaukee, Wisconsin, in an article in the Wisconsin Medical Journal for November, 1925. The article was a discussion of the alleged smallpox epidemic in Milwaukee, and started with the premise that the biggest job of a health department has always been, and always will be, to 'persuade' the 'unprotected' people to be vaccinated—a premise which he explained, or rather, amplified, by stating, 'This we attempted to do in three ways: first, by education; second, by fright; and third, by pressure.'

In expanding his subject, moreover, Doctor Koch-

ler can never be accused of beating around the bush. 'During the months of March and April we tried education,' he wrote, 'and vaccinated only 62,000. During May we made use of fright and pressure, and vaccinated 223,000 people.' But he was still not content, apparently, with the result, for he unhesitatingly declares that there were still too many who could neither be educated nor frightened into vaccination. Hence he felt 'justified in using all of the power a health officer has, and if that was not enough, to get more.' And working from this standpoint, he quite naturally reasoned that, if fear will not accomplish so desirable an achievement as wholesale vaccination, why, then, put on the rack the people who dare to assert their right to individual determination in the matter of their own health measures, and stop their nonsensical opposition. For that is what the means next employed virtually amounted to.

Listen. 'We sent out a third letter to all employers requesting them to have all of their employees vaccinated and at the same time informing them that if a smallpox case developed in their place of employment in the future we would consider their place of business a menace to the health of the community and very likely place the entire establishment under quarantine until it could be cleaned up and made safe for the public. The results of the means employed were stated succinctly,



and doubtless with complete satisfaction to the health commissioner, in these two sentences:

'Putting the responsibility on the employer drove in thousands of antivaccinationists who could better afford to get vaccinated than lose their jobs. All employers cooperated very bravely with this last request, although in a few instances it was necessary to lay off old, reliable, and valuable employees.'

The tragedy of this situation is the more palpable when it is remembered that, even according to recent medical teachings, the effect of fright and such 'pressure' as above described is to produce a mental state by no means highly resistant of such conditions as the health officer was presumably working to overcome. Hence statistics as to the alleged results of his endeavors carry not the least real weight, because any improvement noted must have come about not because of, but despite, the measures employed. And when the significance of the fact is appreciated that without doubt the utilization of means such as those to which Doctor Koehler resorted was actually responsible for a great amount of sickness which followed them and which it was attempted so vigorously to combat, it is seen that the whole issue is one of far more vital importance than might appear on the surface.

It is needless, therefore, to point a moral in so obvious a case of extortion by terrorism. The people of the United States have a right to freedom of choice in healing as in religion. Hence those who attempt to usurp power to force an issue in the opposite direction are running counter to the stream of present-day progress, with consequences which need only be awaited for a short time to become manifest to public view.

(Reprinted from The Christian Science Monitor, February 18, 1926.)

We are glad to give publicity to the statement of the "League" that it *"does not solicit funds for the purpose of opposing vaccination or any other scientific medical policy,"* and we are pleased to have the assurance that *"the Public School Protective League has at no time designated vaccination in Los Angeles 'A Modern Inquisition.'"* They only reproduced and circulated under their own letterhead an article from The Christian Science Monitor.

Also we are glad to quote the League's statement that *"we must emphasize that at no time has the League fostered any movement to prevent the vaccination of anyone who really believed that it would be a protection against smallpox."*

A great many doctors agree with the implication that free adults who are opposed to the certain protection that successful vaccination affords, should be allowed to have their smallpox if they want it. Few, however, are willing to extend such "self-determination" to children, "shut-ins" and other incapables, nor are they willing to see people commit suicide by such a filthy method without making every possible effort to make the facts available to them. Of course the public health authorities have precisely as much authority in the control of smallpox as they have over other contagious and infectious diseases and that authority is still ample in California.

## RIGHT OF CHOICE ON VACCINATION SHOWN BY JUDGE

D. L. Edmonds Answers Stand Taken by University of California President

Under these headlines The Christian Science Monitor, April 27, 1926, says:

Declaring in substance that vaccination has been foisted

upon the public through false representation and because of the financial gain which it brings medical practitioners, Judge Douglas L. Edmonds of the Los Angeles Municipal Court has stated the position of the Public School Protective League and other organizations and individuals who are opposing vaccination in California.

Judge Edmonds' statement in opposition to present methods of promoting wholesale vaccination in southern California is in response to a letter from Dr. W. W. Campbell, president of the University of California, in which Doctor Campbell expresses the hope that the Public School Protective League will not attempt to obstruct the campaign for vaccination, claiming that the efficacy of the practice has been amply shown.

After making it plain that opponents of vaccination oppose not the practice but the fact that health authorities are attempting to make it a compulsory measure, Judge Edmonds' letter declares:

'I fail to see the reason why the advocates of vaccination should so continually and persistently demand compulsion on its behalf. If vaccination protects, as those who believe in it claim, there is no possible reason why they should endeavor to compel others to submit to it. Certainly not for their own protection, because if they are vaccinated, they are protected.'

### EXAGGERATION ALLEGED

I know that the reports of the health department show a large number of cases of smallpox in Los Angeles for the past few months. I know also, and I say this advisedly and dispassionately, that only a very few of these cases are actually smallpox. I believe that publicity was given to this alleged epidemic for the particular purpose of driving a large number of citizens to seek vaccination through compulsion, direct or indirect. I know that vaccination is today a huge commercial proposition and is manipulated as such.

If you do not believe these statements, let me say to you that I have not talked to a single physician, either health officer or private practitioner, who has not admitted to me as man to man that the Los Angeles situation has been grossly exaggerated. Each one of these persons tells me that the great majority of reported cases of smallpox are not smallpox at all and that health authorities have demanded that the medical profession include as smallpox every case even remotely having its symptoms.

If you say that this is impossible, let me remind you that at the time of the influenza situation a few years ago, health authorities demanded the reporting as influenza of even slight colds and that the then State Board of Health acknowledged the figures as grossly exaggerated.

I do not charge that every medical man or advocate of vaccination is deliberately promoting vaccination to his commercial advantage. But I do charge that the profits from the sale of vaccine and its administration are enormous, and that a small coterie of political doctors are manipulating the market for their wares.

### MONETARY RETURN LARGE

When one physician in Los Angeles tells me that he made \$4000 from vaccination in February and the city and county had each bought thousands upon thousands of dollars' worth of vaccine, it is not difficult to see that the advocacy of vaccination may not be as disinterested as many suppose.

In conclusion may I say that I do not see why the smallpox situation should give you the official concern you mention? It would seem to me that your entire official responsibility ends when you make it possible for those who desire vaccination to receive it. When you compel vaccination you seriously encroach upon the rights of every citizen by setting up your own estimate of proper medical treatment as one which the individual must follow irrespective of his idea on the subject.

Let me cite one result of this: The beautiful, attractive daughter of Los Angeles parents of prominence was refused admission to your southern branch without vaccination. She and her parents finally, after much parleying with your officers here, consented to it with much reluctance. Within a week this lovely girl was dead.

There is no question but that vaccination was the cause of death. I should think this case and the serious results which have occurred in other cases of vaccination of students would give you more serious official concern.'

Under date of May 28, Dr. George Parrish, Health Officer of Los Angeles City, in an official and open reply to Municipal Judge Edmonds, says:

"Your attack upon vaccination is evidently predicated upon prejudice and ignorance. The statements contained in your letter are based neither upon fact nor adequate investigation, but are 'seemingly' the result of venom and uncontrolled emotions. Lest the public be misled and impressed by your outburst, I challenge you to give to the public or to myself the name of any reputable physician, either with the Health Department or in private practice, who told you that many of the reported cases of smallpox were not that disease, but that the medical profession included as smallpox any case 'remotely having its symptoms.' I also challenge you to give to the public or to me the name of the Los Angeles physician who made \$4000 from vaccinations in February.

"You say, quoting your own words, 'I know that the reports of the Health Department show a large number of cases of smallpox in Los Angeles for the past few months. I know also, and I say this advisedly and dispassionately, that only a very few of these cases are actually smallpox.' This statement is a deliberate and vicious falsehood. Every single case that this department quarantined was inspected and was smallpox. The records are open to all. Why did you not avail yourself of them?

"Because of your lack of knowledge of smallpox and vaccination you fail to see the reason why the advocates of vaccination urge it on the public. May I enlighten you? There are many persons who, when they know the truth, wish vaccination. It is this class of people that the public health service is trying to reach. I have no fight with the Christian Scientists nor am I interested in whether they vaccinate or not. That is their business; but, as stated above, it is those people who are in quest of the truth and who are misled by false propaganda that the Health Department is attempting to help. Another very good reason why the public should vaccinate is, that the recent smallpox outbreak cost the taxpayers approximately \$600,000. Ninety per cent of the city's cases were those people who listened to such as you and declined to vaccinate. One hundred and sixty-five of those poor deluded persons are now dead.

"As to the commercial side of the problem, the Health Department vaccinated over 350,000 persons without making one cent of profit. Doctors in private practice have to live, and as a rule are just as honest as judges, lawyers, and other professional men. It is but right that they should charge for vaccination when persons come to them.

"You closed your article by citing one result of vaccination. The records of the Health Department fail to show a death permit which will cover the case you have mentioned. Will you please give me the name and address of the attractive young lady who died from vaccination?

"Keeping the above information from the public is to suppress evidence that the bar of public justice demands. You are, no doubt, familiar with the legal maxim that evidence willfully suppressed cannot be construed as creditable. If suppressed, would not the public be justified in assuming that your statements are false?"

These are some reasons why the fair name of the fair city of Los Angeles has been and is being injured by the inexcusable prevalence of smallpox.

Isn't it amazing that an officer of the courts, an administrator of justice, would charge physicians with mercenary motives in urging vaccination, and that an element of the public press—a Christian element at that—would give its space over to such strabismic appeals to ignorance and prejudice, so easily shown to be false? It requires no unusual intelligence to compare the fee, from \$0.00 to \$3.00, a physician gets for vaccinating a person and the fee

for weeks of trying day and night service to the unvaccinated smallpox patient.

Judge Edmonds, who probably feels concern over crime waves and criminals, seems disturbed that a fellow government officer should be "officially concerned" in also meeting his obligation to the people of the city and who, like the judge, bases his action on evidence.

Much of this evidence is recorded on the tombstones of children and other citizens, in the bleeding hearts of bereaved parents, and the sympathies and prayers of Christian people everywhere.

#### A PROMISING HEALTH SERVICE

"Dear Mr. —," writes Doctor — to one of his patients, "I want to call your attention to the unusual prevalence of smallpox in California at the present time and to urge you to be sure that Mrs. —, the children, yourself, and your employees, are adequately protected by vaccination. Vaccination is a simple procedure, entirely harmless when properly done, and a certain protection against one of our most serious and contagious diseases.

"I am sending this letter to all patients whose names appear on my records. If you still consider me your health counselor, I would like to examine each member of your family as to his or her present protection and to vaccinate those who need it.

"If, since I last served your family, you for any reason have availed yourself of your privilege to change doctors, please show this letter to your present physician who no doubt will endorse my plea and render the needed service."

A member submits this proposed letter and wants to know whether or not it would be ethical. In our opinion it is ethical, highly commendable, and contains the germ of a much needed and valuable service which is now, in effect, in operation by many specialists in children's diseases and is susceptible of extension in many directions to the advantage of the public health and to the confusion of much current propaganda. Always with the addition of the last paragraph of the above letter, and possibly scrutiny by a committee on letters on different subjects, there are opportunities for far-reaching and valuable health service which every doctor may render.

In "Periodic Health Examinations," for example, it would be easy to prepare a letter which, if sent out by all doctors to patients whose names are on their records, would do more to establish this excellent service than all the propaganda so widely distributed through the usual channels.

It is certain that some individuals would receive letters from more than one doctor, but with the saving paragraph at the end of the letter, the effect upon the person addressed would be all the stronger, and possibly the thought that one doctor was trying to "steal" another doctor's patients would be eliminated.

Discussion of the question, in letters for publication in the "Readers Forum," or personally to the Editor, is invited.

#### THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

California physicians do not all realize how fortunate we are in having a Board of Medical Examiners made up entirely of members of the C. M. A.

This board has great powers in licensing, regu-

lating, and disciplining when necessary. Their duties in all these respects are constantly increasing in volume and difficulties, which are being discharged with a thoroughness, fairness and efficiency that reflect credit upon the members of the board, upon the profession they represent.

We came near, not long since, having these professional duties and responsibilities assigned to a layman, and in some states such depressing conditions—or others even less effective in safeguarding the health of the people—do obtain.

The California law, or rather the several laws purporting to govern the licensing, discipline, and revocation of licenses of doctors, near-doctors and others who are permitted by the state to practice scientific medicine or any one of several forms of legalized fakery, are admittedly bad. This increases the difficulties and adds enormously to the responsibilities of the Board of Medical Examiners, even in the problem of granting licenses, and it makes the problem of discipline and revocation of licenses amazingly intricate and difficult. In this respect the board is a court—and a busy one—requiring frequent and prolonged sessions of several days each to transact the necessary and growing business.

At its recent session of a full week of all-day meetings, the board had before it some thirty-odd licentiates asking for further consideration of sentences already in force, and some fifteen new licentiates charged with violations of the Medical Practice Act.

The charges of law violation included almost every wrong that a doctor could do to discredit his profession and injure the health of his patients—criminal abortions, illegal operations, using medicine by drugless practitioners, operating "medical colleges" illegally, violation of narcotic law, faked credentials, illegal advertising, pimping for fakers, etc.

A morning spent in the crowded court with a crowded docket was illuminating to this editor. In addition to the accused, there were attorneys, operatives, witnesses, press representatives, and scores of curious or interested spectators of many kinds.

The editor left the meeting with the feeling that more physicians should be familiar with the work of the board, and with the conviction that doctors who violate law and ethics are more afraid of losing their license than they are of any other punishment; that all legal safeguards against issuing licenses to practice medicine are being enforced; that criminals, fakers and undesirables who do have licenses are being as fairly and effectively eliminated as is possible under our defective law; that all these and many other useful services are being rendered by a legal board of our members with a balanced sense of justice and a sympathy for misguided first offenders among doctors that deserves the unstinted commendation of decent doctors and the public—services that could not be rendered by any but a body of informed physicians familiar with the requirements and ethics of scientific medicine, with the provisions of law, and endowed with a sense of justice and sympathy, where sympathy is needed and may be extended without endangering the public health.

## COCAINE CHEMISTRY AND NEW LOCAL ANESTHETICS

The main object in the development of the newer local anesthetics has been to reduce the toxicity, and preserve, or improve on, the anesthetic efficiency, of cocaine. The relative lack of success in achieving this ideal is attested to by the survival of few substitutes, of which the principal one is undoubtedly procaine, and next, possibly, butyn. While the remaining substitutes—and they are legion—may possess some small merit in a particular direction, they cannot seriously compete with the established position of those just mentioned. However, this field is always highly cultivated, and it would be rash indeed to deprecate the efforts, and to deny the possibility of achieving success, along new and untried lines.

For nearly thirty years the German chemist, R. Willstätter, and his school have patiently investigated the chemistry of cocaine, which, it may now be said, is fairly well understood. These investigators have prepared a series of optical isomers of cocaine, among which the dextro-pseudo-cocaine (d- $\Psi$ -cocaine) in the form of tartrate appears to possess certain desirable anesthetic qualities. It should be stated that two series of 6 isomers have been isolated and prepared by Willstätter—i. e., the normal (natural) series consisting of d-cocaine, l-cocaine (appears in coca leaves) and d-l-cocaine (racemic), and the pseudo series consisting of d- $\Psi$ -cocaine, l- $\Psi$ -cocaine and d-l- $\Psi$ -cocaine. The d- $\Psi$ -cocaine occurs as a by-product in the synthesis of cocaine; the other members of the pseudo series being prepared synthetically. The pseudo differs from the normal series in the rearrangement of certain groups in the cocaine molecule. The salts of the pseudo series are less soluble and penetrate tissues less readily than those of the normal series, but they dilate the blood vessels and, therefore, tend to be absorbed more rapidly than the normal isomers. Commercially, the d- $\Psi$ -cocaine is known as "psicain" (Merck).

Although psicain has been previously investigated and claims of superiority over cocaine have been made, the latter have not been free from contradiction and exaggeration. Recently, the product has been reinvestigated carefully by Björkman,\* Wiberg and Santesson of the Pharmacologic Department of the Medico-Chirurgical Institute at Stockholm. Santesson and associates compared the activity of different solutions of psicain and cocaine on taste, the pupil and motor nerve conduction. They found that acid psicain solutions up to 10 per cent strength were practically ineffective on the tongue, but that neutral solutions gave more marked and pronounced anesthesia than equivalent concentrations of cocaine. The anesthetic efficiency for the different tastes was as follows: most marked, acid, and next in order salt, sweet and bitter. The tactile sense on the tongue was also more readily abolished by psicain. Psicain in 1.4 per cent solution did not affect the human pupil, while cocaine in 0.25 per cent caused a marked dilation. Tropo-cocaine, stovaine, alypin,

\* Björkman, Wiberg and Santesson: Skand. Arch. f. Physiol., 1926, 47:145, "Vergleichende Versuche über die Wirkung von Kokain und d- $\Psi$ -Kokain (Psikain). Gray: J. Chem. Soc., 1925, 127:1150, "Aromatic Esters of Acylecgonines."



eucaine, procaine and holocaine had no effect on the size of the pupil, accommodation and intraocular pressure. From these results it is suggested that the well-known pupillary and eye effects of cocaine are concerned with peculiarities of its chemical structure. In practically equivalent concentrations (2.6 per cent), neutral and basic solutions of psicain were found more efficient than cocaine for conduction anesthesia of the frog's sciatic nerve. Acid solutions of psicain tartrate possessed no greater activity than the solution of tartaric acid. This difference illustrates nicely the greater permeability efficiency of basic alkaloids than of their salts, a principle made use of frequently by surgeons in securing better and more complete anesthesia. The better permeability of the anesthetic bases is due probably to their lipid solubility in nerve structures. From their work Santesson and associates conclude that the neutral psicain possesses the following advantages over cocaine: lower toxicity and greater anesthetic efficiency, so that lower concentrations suffice and the anesthesia is more prolonged.

Certain anesthetic derivatives of d- $\psi$ -ecgonine have been recently investigated by Gray of the Wellcome Research Laboratories in London. Their salts show the comparatively sparing solubility in water which characterizes the d- $\psi$ -ecgonine derivatives in general. Preliminary results show that all the new esters, with three exceptions, are more active anesthetics than cocaine, as tested on the rabbit's cornea. The minimum effective concentration of the best of these, benzylbenzoyl-d- $\psi$ -ecgonine, is  $\frac{1}{4}$  that of cocaine. The effective concentrations of this anesthetic are from 0.025 to 0.05 per cent for the cornea and from 0.005 to 0.01 per cent subcutaneously; the average lethal dose is 39 mgm. per kilo in mice. Five are better anesthetics than cocaine as tested by subcutaneous injection; of these the best, B-phenylethylbenzoyl-d- $\psi$ -ecgonine and  $\psi$ -phenylethylbenzoyl-l-ecgonine, are active in  $\frac{1}{8}$  the concentration required by cocaine. The toxicity of the substances just mentioned, as determined by intravenous injection into mice, is considerably less than that of cocaine in the case of the first, and only slightly greater than that of cocaine in the second and third. Apart from these, a rough parallelism, it is claimed, is observable between the degree of anesthetic action and toxicity. Thus, it seems that chemical investigations are continually bringing out new and unsuspected qualities in local anesthetics, though it may be doubted if man's ingenuity has as yet matched nature's secret skill.

#### "THE HIGH COST OF BEING BORN"

Doctors, hospitals, and nurses are under rather vigorous attack from numerous sources in many places for their alleged responsibilities for what the slogan makers call the "high cost of being born."

This wave of criticism has at last been taken up in California, and newspaper reports based upon what should be reliable sources of information claim that whereas "in grandma's day one could enter the world for less than \$100, it now costs an average of \$541.95 to be born, exclusive of nursing service and complications." The investigators appear shocked that it should cost from \$1000 to \$5000 to get some millionaire babies properly transposed from

their intrauterine parasitic existence to their extra-abdominal parasitic lives.

Analysis of these costs and luxuries was not furnished, or failed to interest editors. We are not informed that the costs of production are included in the costs of delivery. Nor are we told of the costs of production machinery running wild with its wastage along the road between production and delivery. Figures as to the costs of babies that do not include an analysis of these items are worse than useless to economists and the public, but they are easily interpreted as a criticism of those who serve, and that is the apparent purpose of many such reports.

Some grandmas may have been able to bring their babies into the world for less than \$100, or even without any cash outlay at all, but plenty of other grandmas were proud of the fact that they paid the equivalent of five thousand, ten thousand, and more for their children.

"Surveyors" often lose their sense of proportion when they begin to set aside certain angles of grandma's conduct, intelligence, and beliefs, and particularly when they are comparing the costs of grandma's babies with the costs of granddaughter's babies. Grandma could buy a pair of shoes for \$1, make her own candles from home-rendered tallow, cook and heat her house with wood cut by grandfather from trees in the yard. A neighbor woman assisted the doctor, whose only preparation for the event was to roll up his sleeves, wash his hands (maybe), and proceed to assist nature. Layettes were made by the mother and were woven with dreams, sewed by love, blessed with faith and hope, and sterilized by kisses.

Today there is no prospective mother in California who may not have all essential services connected with motherhood within costs she is able to pay, from nothing up. To be sure she may go as far as she likes in luxuries, and many elect outstanding luxuries for precisely the same fundamental reason that influences her to have a \$15,000 automobile with exclusive furnishings. The average doctor's fee for maternity service including prenatal and postnatal care is under \$50 in California, and if the large cities are excluded, it averages from \$20 to \$35.

There are numerous hospitals where those with crimped finances may have a flat rate of from \$50 to \$75 for everything, including the doctor's services, which are donated in such instances. Then, of course, there are the forty-odd tax-supported hospitals where the poor may go and have all service free of cost to themselves.

Finally, grandmother's doctor spent from six months to a year of his time and from \$100 to \$300 for his education and \$25 for his equipment. Granddaughter's doctor spends eight years above high school in hard study; he or some one spends \$20,000 for his education, and a decent equipment costs at least \$15,000 more. "Economists" should grasp and investigate more facts before they sling together the stories of a few individuals and issue them as facts arrived at by "research."

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The American Board of Otolaryngology will hold an examination in Denver, Colorado, at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

**A Beloved Physician Passes**—Dr. James H. Parkinson died at his cottage in his beloved Sierra Nevada Mountains, Thursday, July 22, at noon, of carcinoma of the prostate. Funeral services were held at the Episcopal Church, Sacramento, Saturday, July 24. Interment private.

More fitting tribute to this widely known Californian and medical leader will be published in the September issue of CALIFORNIA AND WESTERN MEDICINE.

**The Abundant Life, Benjamin Ide Wheeler.** By Monroe E. Deutsch, University of California Press, 1926. The author modestly calls this book "an illustrated record of a great constructive period in the University of California embodied in the best writings and public utterances of its president from 1899 to 1919." It is all of this and very much more. This book, through a judicious selection of President Wheeler's public utterances, affords the student and his friends an insight into the character, aims and accomplishments of one of the foremost scholars, leaders of men, lovers of youth and first citizens of the Golden West.

No man has had greater opportunities, and no man has accomplished more for Western (American) civilization, than Benjamin Ide Wheeler. No man is more beloved—and rightfully so—than he, and his name will stand pre-eminent in the history of California as posterity will read it.

I am neither a native son nor an alumnus of the University of California, but, in common with thousands of others, one of my cherished possessions is the friendship of this universally beloved man.

The University press have built a book in keeping with its contents so ably edited by Professor Deutsch. What a joy is in store for the alumni in the reading of this book, the brief record of an "Abundant Life" still fruitful and helpful!

**A well-to-do fellow hick** recently discussed with me an interesting complaint about what he considered the outrageous fee of \$250 charged him by a city doctor for removing his appendix, plus a hospital bill of \$90.

A few careful questions elicited the information that his trouble had been of long standing and that his perfectly competent local surgeon had wanted to remove it, proposing a charge of \$100.

He motored to the city, accompanied by his wife and grown daughter, whose hotel bill for the ten days was \$265; three hundred odd dollars went for frocks, etc.; about \$60 went to beauty shops; over a hundred dollars for entertainment and pleasures; and a first payment was made on an expensive combination phonograph and radio set.

Yet this man's only complaint was about the fees of the doctor and hospital. He did not object to a hotel cost of some \$13 a day each for healthy members of his family, but he did object to paying \$9 a day for the far more difficult care of himself by the hospital, and he objected to a surgeon's fee which, considering consequent visits, was not much in excess of his family's "beauty doctor," when compared on a basis of hours of service.

When these facts and comparisons were called to his attention, he admitted their fairness and exposed the inner workings of his mind by a tirade against "bobbed hair."

"Every man," said Oliver Wendell Holmes, "is an omnibus in which all of his ancestors are seated."

No wonder the machine sometimes breaks down or runs through safety stations.

**The Medical Society of the County of Kings** has received the approval of the State Medical Society of New York for its new constitutional revision permitting the enrollment as associate members of laymen. Only those who are interested in scientific work or in the activities of the society will be accepted under the new provision.—M. J. & R.

The Kings County Society are getting a worldwide reputation for leadership. They initiate one good thing after another and make them succeed. If all of the 3000 odd county societies in the U. S. would follow their lead in this last venture untold good would ensue.

There are millions of intelligent people who would consider it an honor to be associate members of live medical societies, to the betterment of doctors and the cause they serve. Co-operation in health matters would then flow in the right direction—toward capable medical leadership.

**The Lay Point of View**—A general practitioner is one who looks for the cause instead of blaming it on your teeth.—Los Angeles Times.

**Aaron Hardy Ulm** (Dearborn Independent, July 3, 1926), writing under the title, "Uncle Sam and the Baby Crop," gives a most telling, effective and withal truthful analysis of the operations of the Sheppard-Towner law.

Doctor Samuel is out-culting the cults in certain phases of the practice of medicine, and in consequence he must accept the rating that public opinion eventually gives to other doctors who presume to practice medicine without adequate preparation for such highly specialized work.

**Every physician has received a Directory** information card. It is important that this data be forwarded promptly to the A. M. A.

This information will be used in compiling the Tenth Edition of the American Medical Directory, now under revision in the Biographical Department of the Association. The Directory is one of the altruistic efforts of the Association and is published in the interest of the medical profession, which means ultimately in the interest of the public. It is a book of dependable data concerning the physicians and hospitals in the United States and Canada.

"Everything from a cell," enunciated the great Virchow. Yes, and there are more than 26,000,000,000 cells, each requiring its own peculiar fuel, doing its own particular work, preparing for its successor, and yet, in health, working in harmony with its fellows in the most crowded existence known.

In first-page stories now being syndicated, Henry Ford says his hospital co-operates with outside physicians. The outside doctor may escort his patient to the front door, introduce him to the inside doctor and back out! At that Ford has no monopoly on "co-operation."

**The Woodshed Method.** It is not popular, nor is it quite socially correct to mention "discipline" as applied to children. While we are still reading and listening to the mutterings of "savants" who are urging children to forgive their parents, for they know not what they do, and some of whom reflect even upon the commands of God as being out of date, a few brave souls are beginning to sound danger warnings.

One of these deserves commendation for his frank

statement that what is needed by the youngsters is "woodshed tactics."

Some of these days a wideawake, intelligent American community somewhere or other is going to try stopping crime by punishing the criminals. — Nashville American.

**"Be it Resolved by the General Federation of Women's Clubs in convention assembled, that we urge the women of America not to imperil their health and that of future generations by reducing methods other than those advocated by reliable physicians."**

Bully for the National Federation!

**More power to the facile pen of Arthur J. Cramp,** head of our A. M. A. Bureau of Investigation. His publicity in "Hygeia" and elsewhere has a telling effectiveness and he is after the fakirs of yesterday and today. Every doctor will get the worth of his subscription to "Hygeia" from Cramp's contributions alone.

**Mary Dewhurst Blankenhorn** ("Outlook," June 30) tells a story of "Britain's Superfluous Women" that contains a biologic and health message worth pondering.

What a world this would be if all editors put into practice the conception of their responsibilities as outlined by Frank O. Edgecombe, president of the National Editorial Association, during their recent session in California, when he states:

"To weigh the acts of men and judge the motives behind the acts, to consider private rights and public policies, distinguishing between the trivial and the important, between the claims of the unworthy and the unclaimed rights of the worthy, between the fallacies of the temperamental enthusiast and the vicious pronouncements of the demagogue on the one hand and the solid foundation of truth on the other; to look forward as well as backward and always upward, prudently always and as tranquilly as may be; these are the duties that hourly lie in the path of the conscientious editor."

The plan of the American Medical Association for medical relief in disaster, published in the A. M. A. Bulletin, June, 1926, deserves prompt consideration and action by state and county units of our great federation.

**Actinotherapy and Allied Physical Therapy.** By T. Howard Plank, M. D. (Manz Corporation, Chicago). This is an interesting book and most physicians, particularly those in unlimited practice who use or would like to employ physical therapy more extensively, may also find it useful. Certainly the subject is important enough, and progress is being made at such a rapid rate and literature is accumulating so fast that the physician who expects to do anything but read and study must rely upon occasional reviews for enlightenment. Doctor Plank has attempted to condense current information of use to the bedside physician in this book of some 450 pages.

**"The Ethics of Business,"** by Edgar L. Heermance (Harper), is a book that every doctor and every other person who wants to be informed in order to be fair-minded should read.

It was not so long ago that newspapers and even more serious formers of public opinion apparently took pleasure in criticizing the code of ethics of physicians. Some still do.

Mr. Heermance shows that hundreds of trade associations, chambers of commerce, advertising clubs, business, fraternal and social organizations today point with pride to their ethical codes. In fact, it would be hard to find a group of interests from bootleggers to bricklayers, from criminals to chiropractors, from bakers to bankers, from miners to ministers, executives, teachers, clubs and what-not who are today without their codes of ethics.

The medical code is the original and oldest because

medicine is the oldest occupation of which we have record. Many of the ethical codes of purely business groups are fully as idealistic and splendid in their purposes as is the physicians' code. The chief trouble with all of them is that human nature is weak and fakirs still fake.

Nevertheless, Mr. Heermance encourages us in the belief that the spirit of ethics is growing among people in all walks of life and that these codes are helpful in our progress toward better things.

It is encouraging to see medical and hospital publicity rapidly focusing on the problem of adequate payments to hospitals for service to industrially or otherwise insured persons.

There is no question but that hospital service to persons insured under industrial accident laws is paid for largely at less than the cost of the service to the hospitals. This wrong is widely prevalent in California, as elsewhere, partly because of the notoriously incomplete accounting systems of many hospitals and because the facts have not been placed clearly enough nor actively enough before insurance carriers or the public.

Insurance carriers quite naturally buy service at what they can get it for, and in the absence of sufficient information, competition and established custom has induced many hospitals to accept this class of patients at a sacrifice.

Wider interest, co-ordinated action and the light shed on the situation by increasing information, warrants the prediction that the difficulty will be remedied; patients will receive more adequate care, and insurance carriers will find the added cost; if not out of present premium rates, these will be increased sufficiently to take the burden of supporting a useful business off the shoulders of voluntary charity.

**Scarlet Fever Following Nose and Throat Operations**—Of forty-eight cases classed as surgical scarlet fever at the Durand Hospital, from 1902 to 1926, Beatrice R. Lovett, Chicago (Journal A. M. A.), states that twenty followed operations, thirteen of which were on the nose and throat. Of these thirteen cases, seven were instances of scarlet fever following operations for cleft palate, two following resections of the nasal septum, and four following tonsillectomies. The intervals between operation and the first symptoms of the disease were: in two cases, two days; in six cases, three days; in two cases, four days; and in three, a few days. All patients had typical scarlet fever, and most of the cases were of the septic type. Complications were unusually numerous, including two instances of bilateral otitis media, two of unilateral otitis media, and two of sinus infections, making a total of six complicated cases in the series of thirteen. One patient, previously operated on for harelip and cleft palate, died following sloughing of the wounds, with profuse purulent discharge and double otitis media. Four nurses caring for this child caught the infection from him. In most of the cleft palate cases, there was sloughing of the tissues and imperfect closure of the defect, so that, although the wounds healed eventually, the operations were not very successful. The occurrence of scarlet fever in children following operations especially on the nose and throat suggests the wisdom of testing and immunizing the patients beforehand. This is particularly advisable preceding cleft palate operations, since most of the patients are at a susceptible age, and if scarlet fever develops, complications are frequent, and the results of the operation are poor.

The scientist appears most transcendent when he reaches a correct generalization by reasoning from instances which do not belong to the rule. Once a concept is suggested and formulated in the mind of the observer, the path which first guided may seem to be no longer of moment. The initial hypothesis then becomes a foolish incidental; it takes more than ordinary candor to admit the groundlessness of the first aberrant step. And the history of science is deficient in the details from which one might study the psychology of discovery.—Edward F. Adolph, Science, June 25, 1926.



## MEDICAL ECONOMICS AND PUBLIC HEALTH

**Myrnie A. Gifford, Chairman Public Health and Anti-Narcotic Committee, San Francisco Federation of Women's Clubs, and in charge of venereal disease and narcotic control work of the City Board of Health, in a recent address before her club made these interesting statements:**

"When the segregated district was closed in 1917 a big step toward the abolition of prostitution specially regarded as a legal or tolerated institution was made. But in the transition from the regulation of vice to nonregulation of vice we were not clear in our own minds what steps were to be taken to a just and scientific way of meeting the problem, and compromised with vice by applying the present hygiene law to women who are promiscuous in sexual relations, but not to men who are promiscuous in sexual relations, and we find that this is neither justice nor hygiene, but still a form of regulation and toleration of vice, and it does not work.

"Gonorrhea and syphilis cannot be controlled by controlling only a small number of promiscuous persons, nor do we attempt to control any other communicable diseases in such a manner. Much the most important factor in the cure of gonorrhea and syphilis is early treatment and any method of dealing with these diseases which is likely to lead those infected to conceal their condition and to delay treatment is a most dangerous experiment. The hurtful association of gonorrhea and syphilis with the police must be uprooted if people ill of these diseases are to seek treatment as readily as those ill of measles and mumps.

"To reckon prostitution a legal offense is an untenable position. It is fundamentally unjust and impractical because it only aims at the woman. That is sufficient to condemn it medically as well as legally.

"Whenever there are reasonable grounds for believing that any persons are suffering with a communicable disease the health officials have the authority to require that such persons be examined. And there are 'reasonable grounds' for believing that persons who are known to be promiscuous in sexual relations are probably infected with gonorrhea and syphilis. It is not necessary to arrest such persons in order to examine them and place them under treatment, if treatment is needed, any more than it is necessary to arrest persons suspected of being infected with measles, tuberculosis, or smallpox. *These diseases should be handled outside of the police courts, by persons fully trained and who understand the problem.*

"Women can abolish prostitution by securing the removal of the words 'prostitute' and 'prostitution' from the laws and refusing to recognize or tolerate a class of women as different from all other human beings. When this is done prostitution will lose its power as did witchcraft when people refused to recognize it. Although there will still be a certain amount of promiscuity as there is still superstition, we will be a freer and happier people."

Of course Doctor Gifford is right in her conclusions that gonorrhea and syphilis are medical rather than police problems, quite as much so as are tuberculosis and smallpox. *The police have never prevented a woman from becoming a prostitute, a man from philandering, nor have they ever salvaged a prospect nor cured a patient.*

It is no reflection on police officers to say that they cannot control the conduct of individuals; prevent sexual intercourse with its potential consequences of gonorrhea and syphilis; cure practically incurable diseases, nor hunt all who have these diseases and hold them while someone else treats them by force.

If the women's clubs can bring about a public opinion that will accept and treat potential and actual victims of syphilis and gonorrhea as they do the prospects and victims of other dangerous infections, they will have the plaudits of all people, in which police officers doubtless would join with hearty enthusiasm.

**Improving Service to the Deaf and Blind—**The C. M. A. Section on Diseases of the Eye, Ear, Nose, and Throat introduced a promising innovation at the 1926 session by devoting one meeting to a symposium by non-medical people engaged in this work.

**R. S. French, Ph. D.,** Principal of the California School for the Blind, speaking on the subject, "What the Oculist May Do to Aid Blind Children Educationally," said:

"The most important service which oculists can render is that of aiding in the securing of early reports in the cases of children of defective vision. Adherence to the law requiring the reporting of cases of communicable diseases is not sufficient. Every instance of serious visual defect or potential blindness should be reported to the Department of Public Welfare or to the California School for the Blind. Up to the present time such reports have been so casual that hundreds of persons have been neglected through years when educational treatment might have been of inestimable value.

"Distinction should be made on the basis of degree of mentality as well as degree of vision. Roughly, three distinct sorts should be recognized: those of fair intelligence and relatively slight visual defect who should be in the conservation of vision classes maintained in the various city systems. Class two consists of those of serious visual defect who cannot profit by attendance upon the conservation of vision classes and who should be either in the state school or in classes maintained for the blind in the larger centers of population. In the third group should be placed all children, no matter what their degree of visual defect, who cannot be reasonably expected to profit by attendance upon school courses. Such children recognized as distinctly feeble-minded ought to be placed in institutions where they will be under custodial care. They have no place in schools with children of normal or nearly normal mentality.

"Oculists may render a very great service by fostering the establishment of conservation of vision classes. Such classes are definitely provided for by law in many cities, but local authorities, unless stirred to action, are likely to be remiss in the carrying out of the law. If, on examination of a child, the oculist finds such defect of vision warrants special treatment, the case should be definitely called to the attention of the Superintendent of Schools, with a recommendation as to essential treatment. When a number of such cases accumulate the community should supply class facilities, and school heads should secure the expert services of a teacher specially trained for such work. In smaller communities where conservation of vision classes cannot be maintained due to lack of numbers, children so afflicted visually should be sent to the state school.

"Oculists can aid the educational authorities by creating sentiment for and insisting upon strict modernity in the treatment of blind children or those with seriously defective vision. Stress of financial condition should not be allowed to serve as an excuse for denying the blind child some approach toward equalization of opportunity with children of normal vision. This can be secured only by a thoroughly modern plant equipped not only for excellent academic work, but for the teaching of everyday duties of the household, good physical habits, good manners, and those trades and occupations possible for the intelligent blind. The need of a proper receiving building in all state schools should be emphasized. The fairly helpless children just entering school should be segregated from those whose training is more advanced and they should be given treatment under conditions favorable to their rapid progress.

"Oculists can perhaps render their greatest service in helping create decently human conditions for the living and employment of the adult blind."

**Coralie Kenfield, Teacher of Lip Reading,** speaking on the subject "The Re-education of the Deafened Adult," said:

"It has been said that the deaf child fails to develop

a normal psychology. The deafened adult reaches the full psychological normal, but because of his deafness, suffers a perversion of mental faculties already developed. The problem in the one case is largely that of starting the arrested faculties toward full development. In the other, of restoring perverted faculties to a normal condition.

"The aims of the teacher of lip reading are many. She must consider the physical well-being of the pupil. Sight must be conserved, ears, nose and throat must be kept clean in the strict sense of the word by means of proper medical advice.

"The teacher must train the eyes of the pupil to be quick and accurate, for the sound movements of speech are some of them so rapid and so obscure as to be almost invisible.

"She must train the mind. If power of concentration, synthetic and intuitive ability be not present she must develop it. She must work for a mind that will respond instantly to impressions—for a mind that by its quickness and alertness can jump from thought to thought without a break in the understanding.

"She must change her pupil's attitude of mind toward deafness. She must appeal to the spiritual side of the pupil's nature. She must overcome in the pupil any tendency to rebellion, suspicion, antagonism, and sensitiveness.

"The teacher of lip reading is gratified when her pupil succeeds in reading the lips, but she is overjoyed when a normal mental and spiritual outlook has been re-established. This is her true compensation.

"Lip reading is not difficult to learn, but it is difficult to apply. This is due in many instances to conditions over which the lip reader has no control. There may be a poor light or bad habits of articulation, both of which will defeat him.

"Lip reading should begin in the home. It makes for a happy, comfortable home life on the part of every member of the family. In the home lip reading may develop almost to perfection, or it may not develop at all. It all depends upon the attitude of the family toward the student of lip reading. Here the question of legibility of mouth is negligible, familiarity through long association making the mouths in the family circle easy to read.

"Little by little the student of lip reading gains confidence and poise. A difficult situation that makes lip reading almost impossible is met calmly. The student is not overcome with mortification because he does not understand. He knows fully the reason of his failure. He is master of the situation, and is much less likely to flounder than is the speaker.

"One of the most vital problems of deafness, as concerning the deafened adult, is that of finding or retaining employment. Employers are known to ask if there is lip-reading ability on the part of the applicant, for such ability implies a wide-awake mental attitude, as against the apathetic attitude of the non-lip reading, deafened worker.

"In times past the deafened adult had small chances of social life. His was a lonely existence. How changed are conditions today. Leagues and clubs for the deafened have sprung up all over the country. They offer opportunities for education, recreation, and service."

**Blanche Van Dever**, Special Teacher of Lip Reading, discussing "The Hard-of-Hearing Child in the San Francisco Public School," said:

"Physicians examined 5359 children in nine schools and found 334, or about 6 per cent, had some hearing impairment. Of this number 124, or about 2 per cent, had a marked impairment. These 124 were enrolled in lip-reading classes. Some of them who received treatment from specialists were restored to normal hearing and were, therefore, dismissed from the class. Others who brought objection from their parents were also excused. The following is quoted from the doctor's report: 'As to probable causes, we found about 60 per cent to be due to remediable conditions, such as adenoids, tonsils, nasal obstruction, and hardened wax. Of the graver causes, in the order

of their frequency, we found measles, influenza, scarlet fever, whooping cough, mumps, cerebrospinal meningitis, tuberculosis, heredity, dental condition, injury from swimming, and one rare condition, viz., completely shutting off of the external ear by congenital malformation.'

"There was no place in the school department where these children could be educated, so we had to make a place. The Board of Education established a special class for the hard-of-hearing, and there are at present twelve in the special class with an excellent teacher in charge who is trained and experienced in both the work for the deaf and the normal child. These children have been transformed by her teaching.

"The majority of these children, it is true, are in need of remedial treatment which is being neglected. A specialist in San Francisco gave his time gratis to examine them last fall when the class was organized, and recommended operations for most of them. Only one boy has been operated and his hearing is improved, though not nearly normal.

"At the present time lip-reading classes are held in fourteen other schools by the special teacher, and ninety-four children are enrolled. In nine schools sixty-seven children are receiving a lesson twice weekly; in four schools twenty-one children have a regular period four days a week for which they are given two units of credit for the term's work. In five schools the opportunity teachers give one lesson a week with the help of the special teacher.

"The Board of Health has recently appointed a specialist, and he has tested one junior high school of 1100 pupils. He found thirty-three cases to be hard of hearing and deaf. Six cases were recommended for lip-reading, but seven more whose audiometer tests showed a loss of 30 per cent were taken into the class. Ten schools have been tested in the past two years. At that rate it would take twenty-two years to have all of our schools tested.

"Establishing contact between the work of the school doctor and the public clinics or private doctors is the great problem. In one school forty-seven cases were referred to a specialist, and the school nurse only knew of two cases who reported for examinations."

**Kate M. Foley**, Home Teacher of the Blind, California Library, had as her subject "How Oculists Can Help with Sight-Saving Classes and Preparation for Oncoming Blindness":

"In California we are remiss in our duty to children with imperfect vision. In San Francisco there is but one sight-saving class, caring for about eighteen children; in Los Angeles there are four classes, caring for perhaps fifty children, and Long Beach has one small class. Many oculists do not know of these classes, and do the best they can to correct visual defects with glasses in order to keep the children in school. But in these days of large classes the grade teachers have no time to give the child who does not see well enough to read what is on the blackboard, or do the writing required, and such children are passed on from class to class, in order not to hurt the feelings of parents or discourage the children.

"A most important subject, and one too little discussed is the attitude of oculists toward patients suffering from eye diseases that, in all probability, will result in loss of vision. If, for some special reason, the oculist fears it would be unwise to tell his patient that blindness is imminent, he should at least urge him to conserve his remaining sight, and advise him to do as many things as possible by touch, and warn him of the consequence of eye strain. But, in most instances, it is kinder to prepare the patient for oncoming blindness, so that he may shape his life accordingly and, when possible, learn to read raised type and use the typewriter.

"When you have a patient facing inevitable blindness, get in touch with some agency for the blind, the school at Berkeley, the State Industrial Home in Oakland, or the home teachers of the blind employed

by the State Library at Sacramento. There are two of these teachers: Miss Catharine J. Morrison, with headquarters at 951 El Molino Street, Los Angeles, and Miss Kate M. Foley, with headquarters at 146 McAllister Street, San Francisco. The instruction in reading and typing is free, and books in raised type are sent by parcel post from the State Library at Sacramento, free through the mail. There is no age limit in learning to read with the fingers. If the mind is clear and alert, and the touch not impaired from some physical cause, there is no reason why even very elderly people cannot learn.

"John Newton says 'you can't shove the darkness out of a room, but you can shine it out.' I see this miracle performed every day, yet to me it is ever new, ever wonderful, stimulating me to greater efforts for my people, because the blind *are* my people, and their joy and sorrow, triumph or defeat, finds an echo in my heart. And so you do not wonder that I am here this afternoon, appealing to you in their behalf, asking you not to prolong a treatment which you know must end in disappointment and grief to your patient. It takes courage, I know, to tell such bad news to a man or woman, but how much more tragic it is to buoy up his hopes, only to have them dispelled by the darkness you can no longer avert. There are so many other ways, too, in which you can help. Co-operate with the National Committee for the Prevention of Blindness, seize every opportunity to lecture to mothers on the care of children's eyes, urge the establishment of sight-saving classes, advocate the proper lighting of schools and other public buildings, and never fail to win converts to a cause that is, I am sure, close to your hearts. I know you all lead very busy lives, but your profession places you in a position to do so much for humanity, and I feel sure you will all be glad to contribute your share to this great task. Then let us adopt prevention and conservation as household words; let us do our best in spreading the gospel of fewer blind babies, fewer children sitting on the side lines, and fewer men and women deprived of eyesight at the floodtide of life. This is one of my cherished dreams, and I know you will all help me to make that dream come true."

The chief things New York's new Medical Practice Act will accomplish according to "American Medicine" (May) are:

1. It will require every practitioner to register annually with the secretary of the State Board of Medical Examiners, thereby furnishing an official list or roster once a year of all duly licensed practitioners in the state. This list is to be used by all authorities as well as the public at large.
2. It will afford opportunity through a grievance committee for the profession to clean its own house. This needs no explanation because there are unethical practices in the medical profession as well as in all other professions, and sometimes greed for money overshadows the desire for intelligent and faithful service.
3. It will provide for prosecutions of all violations of the law by the Attorney-General.
4. It will afford treatment of the sick and ailing by properly trained physiotherapists working under the direction of duly qualified physicians.
5. It will protect the public from the exploitations of quacks and charlatans by regulating the use of the title "doctor" and by the prevention of fraudulent and deceptive advertising.

The prestige of preventive medicine will be enhanced by cutting away the dead wood and teaching only the known facts. The things which today we think might be of value from a preventive standpoint may be discredited by the knowledge of tomorrow. Preventive medicine has made great advances, but for the sake of its own development the uncharted portions of the field should be kept clearly in mind.—Boston M. and S. J., April 22, 1926.

All reputable newspapers have purged their columns of nostrum advertising and are ready to print articles

relating to the prevention of disease and the promotion of health. Numerous men and women have developed the faculty of translating scientific research information into a vocabulary and style of interest to the average non-medical reader.

But newspaper items telling how to treat diseases do more harm than good. Physicians do not treat diseases; they treat persons who have diseases, and this cannot be done by mail or the printed word. There must be personal contact between the patient and his physician.—The Nation's Health, May 15, 1926.

The Humboldt Bank of San Francisco, whose advertisement hereafter will be found in CALIFORNIA AND WESTERN MEDICINE, offer an attractive combined savings, trust, and investment plan calculated to have a wide appeal. It is designed particularly for the benefit of busy business and professional men, and is in successful operation. The object of the Trust Investment Savings Plan, as it is called, is to enable one to create an independent investment fortune without the necessity of assuming the many responsibilities which are attendant upon the selection and ownership of securities. Under this plan any amount can be trebled in a period of less than six years.

In operation the plan works as follows: The investor deposits \$2500 in cash or securities of that value in a trust fund established for the purpose. Humboldt Bank then advances for deposit in the same trust fund any sum up to twice the amount deposited by the investor. The entire fund is then invested.

Under the assumed case the investor pays in \$50 each month, which is applied toward the reduction of the amount of the bank's advance. The income from the entire trust fund, after the payment of the interest due to the bank on its advance, is also used to reduce the principal of the bank's advance. By this means every dollar paid into the fund by the investor is kept working at the highest possible interest return and, in addition, all interest collected from the investments is likewise immediately put to work at the highest rate.

Assuming that you start with \$2500 and pay only \$50 a month, you will have accumulated \$7500 in less than six years' time under this plan. Any other amount may likewise be increased in the same proportion. Business and professional men have been enthusiastic over the Trust Investment Savings Plan because of its practicability. Professional men, particularly, frequently find it difficult to prudently invest their earnings, due to the fact that their professional duties take heavy toll of their time, leaving no opportunity for the careful study of problems of investment. Your securities receive the same careful attention that the bank gives to its own investments. One of the strong features of the plan is that the bank has no securities to sell and therefore is able to give you the benefit of an impartial and unbiased opinion on the merits of securities selected for investment.

Another important feature of the plan is the fact that the agreement may be so drawn that should the death of the investor occur while the agreement is still in force the trust fund will *not* have to be administered in the Probate Court. The fund is distributed directly by the bank to the ones named to receive it by the investor in the agreement. Thus, the expenses and delays of probate proceedings are entirely eliminated.

By providing a definite schedule of investment, by means of which a fortune of a certain size will be accumulated in a fixed period of time, the plan has enabled many investors to derive the greatest benefit from their savings.

In 1925 the Listerine concern spent \$2,100,000 in advertising, while its net profits for the same year were \$2,011,940. More than twenty years ago one of the best known "patent medicine" makers said to his fellow-members of the proprietary association: "The 20,000 newspapers of the United States make more money from advertising proprietary medicines than do the proprietors of the medicines themselves." Evidently they still do.

When John Doe pays a dollar for a bottle of "patent medicine" he little realizes that more than 50 cents of his



dollar has been expended in an effort to persuade him that the nostrum is what he needs.—Hygeia.

**The Twenty-fifth Anniversary Report of the United States Steel Corporation** contains useful and significant medical and health data:

"The average yearly earnings per employee were \$717 in 1902, and \$1828 in 1925; in 1902 the average earnings per employee per day were \$2.33, and in 1925 the average was \$5.88.

"In 1925 the number of serious accidents per 100 men employed was 60.22 per cent less than in 1906 when these activities were started, and disabling accidents were 80.07 per cent less than in 1912. This means when stated in round figures that 46,863 men have been saved from serious injury, and 322,408 men have been saved from any injury which resulted in a loss of time.

"In addition the Steel Corporation has established communities, schools, clubs, educational facilities of various kinds, playgrounds, and a number of other conveniences and benefits for its workers and their families. From 1912, when the records are available, up to the end of 1925, it has spent on these various activities a total of \$158,188,043."

"There was a time when optometry consisted of putting window glass in steel frames and selling it at country fairs, but the optometrist of today must be a scientist in every meaning of the word, for the problem of vision is now known to be connected intimately with the entire subject of 'ether radiations' from x-rays to wireless waves."

The professor of physics who is thus quoted further voiced the opinion that certain problems in visual science require familiarity with physics, physiology, and psychology.—University of California Clip Sheet.

*What about a little pathology?*

**The Federal Government wants doctors** for the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches. Entrance salaries are from \$1860. Those interested may address the United States Civil Service Commission, Washington, D. C.

Since May, 1923, twenty-four counties in the state have been given such (Sheppard-Towner) nursing service. These nurses have established fifty-six permanent and fourteen transient centers to which mothers may bring their children for supervision and advice in matters of child hygiene. At the present time eighteen nurses, partly paid by these funds, are on duty in twelve counties of the state. The demand for this type of work and its ability to aid the mother's community is shown in the fact that within two years over 18,000 children were served in these health centers.—Ellen S. Stadtmuller, M. D., Pacific Coast Jour. Nursing.

**Following up prior news items** regarding the Board of Medical Examiners' investigation of R. Thompson Fowler, Secretary Pinkham sends us the following report made by Special Agent Henderson, and a report made by C. H. McCharles, chemist of the Bureau of Foods and Drugs, State Board of Health, showing the ingredients of Fowler's tuberculosis "cure":

"On June 17 R. Thompson Fowler was acquitted by a jury in the Superior Court of Oakland after a trial consuming two days, the defendant having been charged with a violation of Section 17 of the Medical Practice Act.

"Mr. and Mrs. Raddatz, 75 Dutton Avenue, San Leandro, California, testified that the defendant during the months of November and December, 1925, and January and February, 1926, had treated Mr. Raddatz for pulmonary tuberculosis, the treatments consisting of an inhalation process which Mr. Fowler claims is his secret formula and which is a positive cure for tuberculosis, the administration of internal medicine and by a number of intravenous injections given by Mr. Fowler, covering the entire period as above indicated; further, that at the outset of the treatments Fowler examined the patient with

the use of a stethoscope, confirming the statement of the patient that he believed he had tuberculosis.

"The defendant then took the stand in his own behalf and testified that he had in fact never owned a stethoscope and had not made an examination of Mr. Raddatz, but that the treatments given to the patient Raddatz had only been administered after Dr. David Grisso had called upon the patient, made an examination and directed the treatments which were given, thus raising the proverbial 'reasonable doubt' in the minds of the jurors and which perhaps explains the verdict rendered."

Chemists of the State Board of Health report that this alleged tuberculous cure "contains water, free sulfur, hydrogen sulfide, camphor, phenol, a small amount of guaiacol or creosote, sodium and potassium carbonate and sulfate and no lime and no arsenic."

**Health Officers Recently Appointed**—Dr. Edgar R. Brigham succeeds Dr. C. A. Tillotson as Health Officer of Dinuba.

Dr. Frederick R. Rhodes has been appointed City Health Officer of Culver City in place of Dr. Foster M. Hull.

Dr. George Rothganger has been appointed City Health Officer of Emeryville to succeed Dr. Emily Emery.

Mr. Charles F. Richardson succeeds Mr. Frank Jennings as City Health Officer of El Cajon.

Mr. A. F. MacLean has been appointed City Health Officer of Coalinga to succeed Mr. A. J. Shaw.

Dr. Gilbert A. Kelley of Bridgeport has been appointed Health Officer of Mono County.

**The following California counties now enjoy** the benefits derived from full-time public health administration: San Diego, Orange, Los Angeles, Santa Barbara, San Luis Obispo, Monterey, San Joaquin, Yolo, and Riverside.

**Prize Baby Contests Condemned**—The following significant resolution was passed by the New York Children's Welfare Federation recently:

"Whereas, The Children's Welfare Federation for twelve years has been in close touch with Prize Babies' Contests in this city, and during the years 1913 to 1917 inclusive took an active leadership in the use of this publicity device for arousing public interest in better babies; and

"Whereas, The Federation's experience in this connection has led to the conviction that the time has gone by in New York City for such campaigns, that such contests at best are unscientific and fraught with great danger to the babies participating and to the communities in which the contests are held, that they tend to disrupt organized work and produce dissatisfaction among the mothers of the competing babies; now, therefore, be it

"Resolved, That The Children's Welfare Federation in its Fourteenth Annual Meeting assembled, go, and it hereby does go, on record as being definitely opposed to Prize Babies' Contests and contests of similar character."

Time is recorded by the swing of the pendulum.

**For Shame!** Recently some of our newspapers that belong to organizations whose motto is "Truth in Advertising" have been selling space to such amazing hokum as:

"A man suffers from ill health because the oxygen in his blood fails to pass from the blood to the cells in a normal manner, and this in turn is the result of his iron not acting to its full catalytic measure. Wilshire's Ionaco by magnetizing the iron in the system increases its catalytic value with the effect that the oxygen passes more freely from the blood to the cells and the resulting increased oxidation tends to restore and establish health.

"It is astonishing what miraculous changes occur with people using the Ionaco. The first effect occurs usually within a very few minutes after coming in contact with the machine, and is seen in the heightened color of the cheeks and the brightening of the eyes. Very often neuritis of long standing is immediately relieved. Arthritis, a disease which baffles the physicians both as to its cause and its cure, has been deprived of its terrors, often in a few weeks. In diabetes the increase of oxidation is usually made apparent by the diminution of the elimination of sugar. Ionaco seems a rival to insulin. In cancer, usually no matter what progress the dread disease has made, the pain disappears, and where there has been odor, that too vanishes. A few minutes' treatment with the Ionaco immediately relieves fatigue, and a continued treatment of a few weeks seems almost invariably to restore gray hair to its natural color. In fact, Ionaco is a rejuvenating treatment without the dangers and disappointments of a gland operation."

Apparently not satisfied with this, the advertiser adds under a prominent cancer headline:

"Ionaco is the one proposed remedy for cancer in which

the supreme test of science—namely, the ability to predict—has been justified. Before we had treated cancer we said that, inasmuch as the cancer cells are known to require more oxygen than normal cells, they are more active in proliferation, than the body cells, and hence conquer the body cells. "The logical method of curing cancer, then, would be to give the cancer cells more oxygen and thus render them less active. The hungry dog sleeps when he gets his bone. This is the theory. Ionaco gives more oxygen."

The advertisement closes with the usual offer of "Delightful Free Treatments" and free lectures. How an honest, intelligent publisher can sell space to such hokum and remain at peace with his conscience is an enigma.

**Health Officers Newly Appointed**—Dr. J. Rollin French has been appointed city health officer of Avalon, to succeed Dr. Robert V. Baker.

Dr. T. P. Peery, beginning July 1, will serve as health officer of Sutter County in place of Dr. Smith McMullin.

Dr. J. B. Blackshaw has been appointed city health officer of Antioch in the place of Dr. W. S. George, who died recently.

Capt. David L. Adams has been appointed city health officer of Newport Beach, to succeed Mr. J. A. Porter, deceased.

**Treatment of Idiopathic Purpura Hemorrhagica**—The treatment advocated by J. W. Sooy and Theodore S. Moise, New Haven, Conn. (Journal A. M. A.), for idiopathic purpura hemorrhagica is said to be entirely symptomatic in nature, with chief emphasis placed on checking the hemorrhage and replacing the lost platelets. Ten cases have been treated. In two instances, the treatment was used as a method for the preoperative preparation of patients in need of surgical attention; in one instance, for the extraction of several teeth in a woman who had bled profusely for three days after a recent tooth extraction; and in a second patient with a marked hemorrhagic diathesis, on whom a tonsillectomy was indicated. These procedures were followed by a normal convalescence free from bleeding. The method of treatment in these cases has been as follows: On the first day the patient was given two exposures of six minutes each, at a distance of thirteen inches, on the entire dorsal and ventral surfaces of the body. The exposures were increased daily by three minutes for five days, after which the exposure may be increased in daily increments of ten minutes. It is rarely necessary to increase the exposure beyond twenty-eight minutes. This procedure gives a massive exposure and may produce a somewhat painful hyperemia. In such cases, the treatment is omitted on the following day. No serious burns have been observed. One case is reported in detail to illustrate the effect of this treatment on the disease. When the patient was first seen, June 4, 1925, the platelet count was 108,000 per cubic millimeter. She was given five daily exposures to the mercury vapor quartz lamp. On the fifth day, the platelet count was 242,000 per cubic millimeter. On account of a severe cold, the patient did not appear for treatments until five days later. At this time, the platelet count had fallen to 152,000, and there was slight epistaxis. Daily treatments were commenced, and after twelve days (June 25) the platelet count had risen to 546,000 per cubic millimeter. The treatments were discontinued about eight months ago, and there have been no further evidences of the disease. The blood platelet count has been maintained at the normal level.

**Interesting Results from Use of Parathyroid Extract in Case of Osteitis Deformans (Paget's Disease)**—Suggested by the work of Collip on parathyroidectomized dogs in which the administration of extracts of parathyroid glands raised the calcium content of the blood, this substance was employed by Anthony Bassler, New York (Journal A. M. A.), in a case of osteitis deformans with a happy result. In this case of steadily progressing Paget's disease no treatment was of any value up to the moment the parathyroid was started. Within a short time after its use was established a most marked change for the better occurred. The dose of parathyroid was 1/10 grain (0.006 Gm.) after each meal.

## CALIFORNIA MEDICAL ASSOCIATION

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### SECTION PROCEEDINGS 1926 SESSION

(Continued)

**Eye, Ear, Nose, and Throat Section**—William H. Dudley, Los Angeles, chairman; Percival Dolman, San Francisco, Secretary.

The section held two meetings. The chairman's address was published in the June issue of CALIFORNIA AND WESTERN MEDICINE.

Edward Jackson of Denver was called to the chair and conducted a symposium on refraction, carried out as a general discussion of questions which were submitted prior to the meeting. The discussions were guided and summarized by Jackson in a masterly fashion.

Section officers elected for ensuing year: Percival Dolman, 1165 Flood Building, San Francisco, chairman; Barton J. Powell, Farmers and Merchants Bank Building, Stockton, vice-chairman; Simon Jesberg, 1151 West Sixth Street, Los Angeles, secretary.

Joseph Beck of Chicago then took the chair and conducted a symposium on Accessory Nasal Sinus Diseases. This symposium was based upon questions previously submitted and was conducted along the same lines as the one led by Jackson.

**Second Session**—The meeting was given over to the following interesting and unique program:

"Re-education of the Deafened Adult Through Lip Reading," Coralie N. Kenfield, Teacher of Adult Lip Reading, San Francisco Public Schools: paper and demonstration of lip reading by deafened adults.

"The Hard-of-Hearing Children in the San Francisco Public Schools," Blanche Van Deever, Teacher of Lip Reading, San Francisco Public Schools: paper and demonstration of lip reading.

"Acoustic Education," Lilla B. McKenzie, Department of Acoustic Education, Central Institute, St. Louis, Missouri.

"The Oculist and Sight-Saving Classes: Preparation for Oncoming Blindness," Kate M. Foley, Home Teacher of the Blind, California State Library.

"What the Oculist May Do to Aid Blind Children Educationally," R. S. French, Principal California School for the Blind: paper and demonstration of reading by blind children.

At the close of French's demonstration the group of teachers who gave the day's program were thanked for their co-operation. A rising vote of thanks was given to Doctors Jackson and Beck for their part in the program.

### ALAMEDA COUNTY

**Alameda County Medical Association** (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting was held June 21, J. K. Hamilton presiding.

Program—1. "Principles of Medical Ethics of the California Medical Association"; discussion opened by W. C. Adams.

2. "Cancer and a Visit to Gye of London"—C. A. Dukes.

3. "Clinical Study of 100 Cases of Infection of the Urinary Tract" (illustrated with lantern slides)—W. W. Cross.

The code of Medical Ethics as adopted by the California Medical Association was discussed and adopted.

In his talk, "Cancer and a Visit to Gye of London," Dukes said that when in October, 1925, he visited Doctor Murray, who is in charge of the Imperial Cancer Research Fund in London, he was taken by him to visit Doctor Gye in his laboratories in the suburbs of London. He found it extremely interesting to be with these scientific investigators of cancer and get their viewpoints of the progress being made. The doctor said that Murray

is very enthusiastic over the work being done by Gye and feels that Gye is on the road to a more thorough understanding of the cancer problem than we have at the present time. Gye assured Dukes that he is not working upon the cure of cancer, but simply trying to establish the cause. During his travels Dukes came upon many proclaimed cures and theories of cures from the emetin treatment, the serum treatment advocated by the Germans and much thought of in Italy. At the time of his visit to Doctor Bier's clinic in Berlin, the Americans were not being very graciously received; in fact, at the time of his visit, clinics had been closed to American visitors. He believes that the misunderstanding which caused this situation has since been corrected. Dukes came back from his travels firmly convinced that early and thorough removal of cancer by surgery with the aid of radium and x-ray is the most promising form of treatment. The doctor found the fakirs strong everywhere and thinks that they should be discouraged by publicity through legitimate medical organizations.

W. W. Cross presented a paper upon a clinical study of 100 cases of infection of the urinary tract. Tuberculosis or gonorrhea was not the cause. These cases ranged in age from 5 to 70 years, the average 34, showing the condition present during active life. Of the 100 patients, 13 were males, 87 females. Blood pressures were low, blood chemistry normal. Urinary analysis disclosed pus in all cases, albumen varied from slight cloud to heavy precipitation. Microscopically, pus, red cells—an occasional case—and renal epithelium were present in the order mentioned. Slides demonstrated changes noted by pyelograms which varied from normal to complete destruction when considered as a composite clinical picture.



#### PLACER COUNTY

**Placer County Medical Society** (reported by Robert A. Peers)—Through the courtesy of the Hobart Mills Company and by invitation of the medical superintendent, Dr. Richard O. Schofield, of Hobart Mills, the Placer County Medical Society held its regular meeting in Hobart Mills, Saturday, July 17. The members of the Society and visitors were the guests of the Hobart Mills Company for luncheon and dinner.

There were present the following members and visitors: Members—C. J. Durand, M. E. Thoren, R. H. Eveleth, Carl P. Jones, D. D. Johnson, D. H. Pettingell, W. L. Whittington, R. O. Schofield, J. A. Russell, R. A. Peers, H. N. Miner, W. A. Lavery, F. L. Fanning. Visitors—L. L. Stanley, San Francisco; Harry E. Alderson, San Francisco; Joseph Catton, San Francisco; R. A. Davison, San Francisco; Robert Howell, Auburn; G. W. Henry, Reno; C. D. Piersall, Reno; Robert S. Peers, Colfax; James P. Warren, Portola; J. A. Fuller, Reno; O. S. Cook, Sacramento; Horace Wrinch, Hazelton, British Columbia; J. E. Harbison, Woodland; J. A. Bernard, Truckee; Mr. Thoren, Weimar.

The literary program was as follows: Leo L. Stanley, San Francisco, "Testicular Substance Implantations"; Harry E. Alderson, San Francisco, "Skin Disturbances Due to Foods and Drugs"; Joseph Catton, San Francisco, "Medical Aspects of Fifteen Cases of Murder."

This meeting was one of the most successful and best attended of any meeting held by the Placer County Medical Society in recent years. The literary program was of a high order and of unusual merit. All the papers were well discussed. Following the literary program the members and visitors inspected the plant and the company's hospital.



#### SACRAMENTO COUNTY

**Sacramento County for Medical Improvement** (reported by Bert S. Thomas, secretary)—The June meeting was held in the Gold Room of the Sacramento Hotel on the fifteenth. C. E. Schoff presided. The minutes of the May meeting were read and approved.

The paper of the evening was entitled "Contraceptive Methods." This was presented by James F. Cooper, medical director of the Clinical Research Department of the American Birth Control League. Cooper first reviewed the whole birth control movement, stating that

it had started on an emotional basis and had passed then to scientific people through the sociologists, the agriculturists and the biologists. He discussed various conditions requiring permanent and temporary birth control. By means of a questionnaire the league has found that the program of birth control has been adopted by three-fourths of the intelligentsia. This proves that the birth control movement is here, for Cooper adds: "What the classes do one day, will be imitated next day by the masses." The purpose of the league is to tie up the birth control movement with the medical profession, putting the proper knowledge in the hands of the family physician. In this way the information will be properly guarded and there will be no affront to the public. Cooper believes in preventing pregnancy where there is a real medical reason for it, but does not believe in interfering after pregnancy has once begun. The work of the New York Clinic, which has handled 6000 cases in two years, was summarized. Cooper concluded by reviewing various methods employed by that clinic and what the future plan of study is to be. The subject was discussed by Doctors Hanna, Topping, Hale, Lindsay, Wilder, Howard and Schoff.

Application for membership was read for the first time from Leonard W. Weaver. The applications of William E. Richardson and J. Hidetaro Miyasaki were read for the second time. A vote showed neither was accepted.

The board of directors reported that C. E. Schoff had been appointed as our representative to the Sacramento Federation of Social Agencies; also that E. Loiseaux had been appointed a Red Cross director and chairman of their first aid committee. The directors approved this action; also that Doctor Covington, of the Rockefeller Foundation for Public Health, had appeared before the board of supervisors to discuss the appointment of a full-time health officer. It was thought best for the board of directors to desist from making any comment to the supervisors on this subject.

The president reported the appointment of "a 1928 committee": Harris, Hale, Drysdale, Scatena and Bramhall; he also reported the replacing of Parkinson on the by-laws committee by Thomas.

Meeting adjourned.



#### SAN DIEGO COUNTY

**San Diego County Medical Society** (reported by Robert Pollock, secretary)—On Tuesday evening, June 15, the staff of Mercy Hospital convened to discuss two important propositions submitted by the management, namely:

1. That in all cases, at least one other member of the staff should be called in consultation, before any major surgical operation be performed, except in cases of extreme emergency.

2. That a chief of staff for each department be elected to serve in the capacity of such consultant.

These resolutions brought forth by the chairman for general discussion were thoroughly thrashed out and at the close of the discussion were rejected as unnecessary, it being the almost unanimous opinion that the executive board of the staff could serve in such advisory capacity. Discussion on these measures was participated in by the following: Geistweit, Burger, Churchill, Weiskotten, Stealy, W. Potter, Reese, R. Carter, Andrews, Cornell, Eager, McColl, Strahlmann, Willier, Welpton.

The balance of the evening was spent in discussing the histories of cases that had died in the hospital during the previous month. This meeting brought out an unusually large attendance and was presided over by Doctor Burger.

On Tuesday, June 22, the staff of the San Diego County General Hospital held a very interesting clinical session. Doctor Arnold reported a case of multiple abscess of the pancreas, which had been removed at autopsy, as operation failed to relieve the advanced pathology.

Doctor Lee reported a case of stone in both kidneys with operation for resection of the more badly diseased kidney. This case had been carefully studied and showed good judgment on the part of the operator.

Doctor Strahlmann presented a group of children with



spinal disease arrested by careful orthopedic treatment. In one case an Albee bone-graft taken from the tibia gave excellent results and the little one's nutrition was advanced and general progress was very rapid.

Doctors Little and Ratty presented, in order to show progress, a case of tumor of the spinal cord, operated six months ago. This was a case of extreme interest from the diagnostic, surgical, social, and economic points of view, and brought out considerable discussion. Doctor Little also presented a young man who rather rapidly emerged from the somnolent depths of encephalitis lethargica after entering the hospital.

These clinical programs furnished by the staffs of our hospitals offer the finest kind of cultural opportunities. Each one is a condensed graduate course in itself. They are worthy a larger attendance than they usually attract.

On Tuesday, July 6, a special meeting of the medical society convened in the library to listen to a talk by Dr. Alfranio do Amaral, director of the Antivenin Institute of America, located in San Paulo, Brazil. The doctor is at present engaged in the United States on research and promotion work tending to establish a similar institution in our country for research work and the manufacture of specific and polyvalent serums for the treatment of the bites of poisonous reptiles of North America.

He spoke very entertainingly for an hour on the various poisonous snakes of North and South America, giving a graphic description of what has been accomplished in Brazil and of the detail work of the San Paulo institution. His descriptions were illustrated by lantern slides. At the conclusion of his lecture the doctor produced a couple of diamond back rattlers and showed how easy it was to catch them by the nape of the neck and make them disgorge their venom for laboratory purposes. In San Diego the doctor is having the co-operation of the Board of Park Commissioners and of the Zoological Society. He hopes to have the antivenin ready for commercial distribution in from six to eight months. He emphasized the fact that in agricultural districts snakes of all kinds seem to be rapidly increasing in numbers, his South American statistics showing a tremendous falling off in the number of deaths from snake bite during the past few years during which time the antivenin has been available for prompt treatment.

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#### SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex. C. Soper, Jr., secretary)—The regular July meeting was held at the Cottage Hospital as usual, at 8 p. m. Monday the twelfth. In the absence of all the vice-presidents, the Society, on motion duly passed, elected Dr. Henry C. Bagby as temporary chairman.

Twenty-four members were present, with Mr. Curtis, the superintendent of the hospital, and Dr. Edgar F. Smith of Los Olivos.

The minutes of the previous meeting being read and approved and ordered placed on file, the professional part of the program began with a talk by Donald G. Clark, M. D., on "Lipiodol in Bronchiectasis," illustrated with x-ray films. This was discussed by Drs. Samuel Robinson, Henry Ullmann and Allen Williams.

The second presentation was a talk by Samuel Robinson on "Iodine in Treatment of Hyperthyroidism," based on his recent visit to the Crile Clinic in Cleveland. Drs. Rexwald Brown, Sansum, Freidell, Gray, Ullmann and Marion Williams took part in the discussion.

The third was five case reports by Rexwald Brown—operative cases with x-ray film reports. These very interesting cases were discussed by Drs. Bagby, Ullmann, Robinson and Pierce.

Thomas W. Shorkley of Carpinteria having applied for admission through the usual channels, was unanimously elected to membership.

The circular from the A. M. A. regarding "Medical Relief in Disaster" was read and approved. The next order of business was a presentation of a plan by Mr. Curtis of the hospital to institute a series of lectures to the public on health and dietetic measures at regular intervals next fall, and given by members of the staff.

This meeting with the approval of the Society, was endorsed and, on motion, passed unanimously.

The final business was the reading of a list of names of people in the community who had failed to pay their bills for medical service, the secretary endeavoring to interest the Society to enable him to keep such a list for reference for members, so that after a time the profession could be protected more than it has been.

On motion the meeting adjourned at 10:20 p. m.

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#### SISKIYOU COUNTY

Siskiyou County Medical Society (reported by S. S. Kalman, M. D., secretary)—The Siskiyou County Medical Society met in the Granada Hotel, Granada, on July 11. Those present were: Doctors Ankele, Bathurst, Heaney, Kalman, Lucas, Nutting and Pius. Doctor Bathurst presented a paper on "Disorders of the Thyroid." His researches show that in Scott Valley endemic goitre occurs only in the west side, where the water is soft and poor in iodine. He warns against using iodine therapeutically except in simple colloid goitre and as preoperative procedure in Graves' disease. In the discussion following all members present took part. Doctor Pius made a plea for recognition of hyperthyroidism before the classical signs are present and stressed the importance of focal infections as possible causative agents.

After the meeting the doctors and their wives were guests of the Society for dinner, which kept them together for several hours.

#### DEATHS

Todd, James Hamilton. Died at Piedmont, June 23, 1926, age 80. Graduate of Cooper Medical College, California, 1883. Licensed in California in 1883. Doctor Todd was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

White, Sherman T. Died at Redding, June 19, 1926, age 62. Graduate of the Eclectic Medical College, Cincinnati, 1888, and the St. Louis College of Physicians and Surgeons, Missouri, 1900. Licensed in California in 1892. Doctor White was a member of the Shasta County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Infant Feeding—Clifford G. Grulee, Chicago (Journal A. M. A.), reviews briefly the activities of the Infant Welfare Society of Chicago which, in connection with the stations of the Chicago Board of Health, covers the poorer districts of the city quite completely. The work of the two is about equally divided, and since the Infant Welfare Society was in the field first, the poorest districts are covered by its stations. There are twenty-five stations, and they take care of populations of all nationalities and colors. Of 2293 children under 1 year of age under the care of the society, 26.55 per cent were exclusively breast fed, and 71.5 per cent were exclusively or partially breast fed. Of 1531 children under 6 months of age, over half were exclusively, and seven-eighths were exclusively or partially breast fed. Only twelve babies had to be weaned for causes other than failure of milk supply before the 9 months' period. Cereals and vegetables were extensively used, both as adjuvants to breast milk and as part of the food given to those wholly artificially fed. Except for the substitution of some other sugar for sucrose, special formulas were used in only twenty-three cases, and acid milks were employed in only twelve of these. In spite of a severe respiratory epidemic, only nine babies were in hospitals at the time of this survey. The experiences of the society show that seven out of eight babies under 6 months of age can be fed in whole or in part on the breast. Cereals and vegetables can be used to advantage in feeding infants in the second six months of life. Acid milks are necessary in only one in 300 cases of infant feeding. It may be necessary to substitute for cane sugar some other form of sugar in less than 10 per cent of artificially fed babies. There is probably no advantage whether in the use of proprietary infant foods, and practically no indication for their use.

## UTAH STATE MEDICAL ASSOCIATION

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.,.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. Gr̄sy, M. D., Kearns Building, Salt Lake, .....  
Associate Editor for Utah

### THE SKIRMISH LINE

Medicine, be it of whatever type, from public health instruction to the handling of the more technical problems which legitimately belong to the specially qualified expert in that particular line of practice, without the general practitioner is like an army without its points of contact—its skirmish line to first feel out the enemy.

Literally the general practitioner—that poor guy who for the last five or six years has been heralded as about to become an extinct species—is as essential now as ever, and in the future will be no less essential than he now is. For literally he is the soldier in the skirmish line of the battle against disease. He it is who first contacts the enemy, feels out his position, and reports on the condition as to the enemy's position and character and strength.

Contact between him and the patient should be humane, intimate as regards study, and close from the standpoint of mutual interest. Then, like the soldier again, when the position of the enemy (the nature of the disease) is developed, let him, if strong enough, press home his attack and, if not, fall back on the "support"—the man who specializes in such conditions—the "heavy artillery," if you like, to drive on the attack.

Nope! the bird professional or layman who thinks that the genus "general practitioner" is due to disappear from the medical field is, in the parlance of the day, all damp. The G. P. is still with us. Long may he wave!

### COLOR THERAPY OR COLOR BLINDNESS

We as a profession have rather been running to colors of late. We may almost be said to have been experimenting with a color therapy in a somewhat facetious sense, but with a grain of sense in the statement none the less. Mercurochrome is red and gentian violet is blue (sugar is sweet; at least that's true) and acriflavine is yellow past any denying. And we've been regaled with all sorts of sales literature of a scientific or quasi-scientific nature describing what these colorful chemicals will do. Veins by the thousand, nay by the hundreds of thousands, have been punctured for the introduction of the first two at least into the circulation. And the residuum of all this intravenous assault is what?

In the majority of instances, fortunately, the patients have survived; and so have the organisms against which the attack was brought! *A therapia magna*, the dream of Ehrlich, still seems to be a dream as much as anything else. The best that can be said for these products of the synthetic art appears to be that in a slight degree they are bacteria-static. Even the most ardent supporters of this type of therapy are coming to claim little more than that.

From a bactericidal standpoint their employment has seemed to have been a vast disappointment, another dream which has failed to come true.

And turning from hypodermic-intravenous medication, no more appears to have been accomplished by enteric medication with the same group of salts. Acriflavine may, it is true, affect to some extent the intestinal flora, but there is an actual danger in its continued use. It possesses a definite toxicity, and may, as appears from recent studies, result in a diffuse hepatitis if too long employed. True, each and every one of these chemicals has a certain proved and definite field of use, but aside from that field we can only feel that in the greater hope held out for their employment they, like so many of the theoretical agencies exploited in recent years, have failed.

And hence we are inspired to ask if the profession may not be in a measure afflicted by a mental color blindness in clinging to more than their essentially limited use; if no matter what the color of the salt employed, the total result of their continued employment beyond that recognized limited extent, is not apt to be the blues?

*We want to apologize* for the fact that the full report of the recent State Association meeting was not printed in the June number of CALIFORNIA AND WESTERN MEDICINE. This is not the editor's fault. The stenographic service employed to report the meeting faithfully promised to have the report in the hands of the editorial staff in time for press. But despite said promise, the air mail, 'n everything, they failed. We're not revengeful, but it would be poetic justice if when they present their bill for this delayed service they had to wait.

**Salt Lake County Medical Society** (by M. M. Critchlow, secretary)—The May 24 meeting was held at the Salt Lake County Hospital. The program was arranged by members of the hospital staff.

Clinical cases: Arthritis deformans, S. C. Baldwin; tic douloureux, G. N. Pace; general septicemia, G. R. Roberts; intraperitoneal transfusion, E. R. Murphy; tetanism, E. R. Murphy; lobar pneumonia—early simulating meningitis, E. R. Murphy; gunshot wound of knee, F. E. Straup; representation pulsating sarcoma, F. S. Scott; pathological specimen breast tumor, L. L. Daines; report of concussion with microscopic and lantern slides, N. Miller.

Septicemia discussed by L. L. Daines, F. C. Gibson, and G. N. Pace. Gunshot wound of knee, by F. S. Scott and L. N. Ossman.

C. Ralph Cornwall, L. E. Crowney, A. N. Leonard, and Thomas J. Welsh were elected to membership. O. Sundwall was elected by transfer from Utah County.

Refreshments served at close of meeting.

**At a special meeting** held at the Holy Cross Hospital, May 28, twenty-nine members and seven visitors were present. Stuart Pritchard of Battle Creek lectured on "Bronchiectasis," illustrated by lantern slides. His lecture was chiefly concerned with the intratracheal injection of lipiodol as a diagnostic of therapeutic measure in bronchiectasis.

**Meeting June 14** called to order by President F. H. Haley; twenty-five members, and no visitors present. The meeting was devoted to consideration of reports of committees.

**A special meeting** was held Friday, July 16, with President F. H. Haley in the chair. There were twenty-nine members and eight visitors present.

E. V. McCollum of Johns Hopkins University gave an extremely interesting talk on "A Recent Research in the Vitamin Field."

Major S. C. Gurney, medical officer of the 104th division, has been ordered to report for duty at the Panama Canal zone. Major Gurney for the past four years has been chief surgeon for the division, with headquarters in Salt Lake. At present he is conducting a medical school for reserve officers at Camp Lewis, Washington.

We record with the sincerest sympathy the death of the mother of Dr. T. William Stevenson last month.

E. F. Root, Salt Lake, was elected president of the Northwest Medical Association at the annual convention at Spokane. Edward I. Rich of Ogden was elected one of the councilors.

G. E. Christensen of Payson has been appointed to take charge of the full-time health unit of Utah County.

**Death**—Dr. Samuel Hunter Pinkerton, 69 years old, chief surgeon of the Oregon Short Line Railroad since March, 1897, died at 6:27 o'clock Saturday morning in Los Angeles, California, of pernicious anemia.

He was a pioneer in western medicine and an advanced thinker in other lines. He introduced physical examination of railroad employees nearly thirty years ago.

Born in New York City, May 27, 1857, Doctor Pinkerton in his earlier days attended the Bellevue Hospital Medical College in New York City, from which institution he was graduated in 1883. He was later a member of the Bellevue hospital staff from 1884 to 1885, as instructor of anatomy.

Doctor Pinkerton was prominent in the western country, having settled here in the early days, where he practiced his profession, and later being recognized as an authority on surgery. He was a member of the Utah State Medical Society and also was at one time a member of the staff of St. Mark's Hospital and was manager of the old Judge Mercy Hospital. The doctor was also one of the eminent members of the staff of Dr. W. H. Groves' Latter-Day Saints' Hospital.

Coming to Utah expecting not to recover from a serious illness which had caused him to be interned in the Bellevue Hospital from 1883 to 1885, Doctor Pinkerton got as far as Salt Lake City, where he was placed in a hospital. After several months of confinement he recovered and commenced what may be said to have been the most colorful and successful career of surgery in the West. He handled what was undoubtedly the largest surgical practice yet enjoyed by any member of the profession in the intermountain region.

Doctor Pinkerton is credited with the successful construction and equipping of three of the best railway emergency hospitals ever built. They are located at Pocatello and Glenn's Ferry, Idaho, and at the north yards of the O. S. L. in Salt Lake.

Supervising a staff of approximately eighty surgeons, Doctor Pinkerton also had the care of more than 15,000 employees of the railroad company. He performed some unusually successful operations for members of the company before the days of "safety first" and when safety appliances on railroad equipment were not known.

Doctor Pinkerton was also known for his devotion in helping those who possessed limited finances.

Doctor Pinkerton had been a member of the Alta Club and the Chamber of Commerce.

Among the things that he was a pioneer in was the introduction of physical examinations for candidates for employment. He introduced a physical examination on the railroad line twenty-nine years ago, and the standard of examination is still intact. The doctor was also a leader in advocating railroad sanitation in all branches of the company. He was a member of the staff of Governor Heber M. Wells of Utah during his term of office.

Doctor Pinkerton had been in poor health for a year or more and went to California in December, 1925, for treatment. He had resided in Salt Lake continuously since first coming here.

Surviving is his widow, Mrs. Alice M. Slavan Pinkerton, who is in Los Angeles.

Funeral services were held in Los Angeles.

J. C. Landenberger, formerly assistant chief surgeon of the Oregon Short Line Railroad, has been appointed chief surgeon to succeed the late S. H. Pinkerton.

Quite a number of the Medical Reserve Officers have been called up for active duty during the past month. Majors Maurice Critchlow, James Kerby, J. U. Giesy and Ossman, and Captains Wilcox, Woolsey, and Skofield have been at Fort Douglas in connection with the Citizens' Military Training Camp. Several others, a list of whom we have not been able to obtain, were called to the training school at Camp Lewis, Washington, for a period of instruction.

**Nontuberculous Peribronchitis Simulating Occult Tuberculosis**—Under the designation "chronic nontuberculous pulmonary infections" or similar cumbersome circumlocutions, Charles N. Meader, Denver (Journal A. M. A.), says there have been described from time to time groups of cases in children and adults presenting the symptoms of toxemia of varying grades, with chronic cough and expectoration and physical signs indicative of varying degrees of pulmonary fibrosis, sometimes associated with bronchiectasis. The sputum is persistently negative for tubercle bacilli, but contains one or more of the common pyogenic organisms. The course is often interrupted by acute respiratory tract infections, and the usual association of the condition with foci of infection in the upper respiratory tract has been emphasized. Sooner or later the earlier stages tend to become obscured by the development of asthma, chronic bronchitis or perhaps a bronchiectasis. It is significant that this group of cases has received much more attention since the recent pandemic of influenza. The clinical picture usually described as characteristic of these nontuberculous infections is to be compared with, and differentiated from, the well-developed forms of pulmonary tuberculosis; and this differentiation is usually not excessively difficult, if reasonable care and persistence in clinical and laboratory study are devoted to it. By contrast with the well-defined cases of tuberculous and nontuberculous infection, the symptoms and physical signs of the mild types of both tend to be vague and indefinite, and the temptation to regard the complaints as factitious is often great. Differentiation from occult tuberculosis cannot safely rest on any one symptom or physical sign, or on any one specific test. It must be based on a careful survey of the entire clinical picture, and a painstaking evaluation of the symptoms may be of quite as much value as the presence or absence of abnormal lung signs or the response to specific tests; the weight of evidence is alone trustworthy. It is important that these conditions be recognized and differentiated because, properly treated, they are susceptible of marked relief, but tend, if untreated, to the development of more marked and serious involvement; they offer materially different prognoses as to the patient's probable future limitations and respond to materially different forms of treatment.

The American people spend \$3,000,000,000 a year, or about 6 per cent of the national income, for vacations.

He is but a child who is afraid lest his friends and servants should perceive that he is sick either of a surfeit or a debauch. He that is ashamed to confess the crudity of his stomach today will tomorrow with shame confess that he has either a diarrhea, a fever, or the gripping in the guts. You think it is a disgrace to want, but it is a greater disgrace to bear the crudity, heaviness and fullness of your body, when it has to be carried into the bath like a rotten and leaky boat in the sea.—Plutarch's Rules of Health.



## MEDICAL AND HEALTH AGENCY NEWS

The Health Officers' Section of the League of California Municipalities will meet in annual conference in the Yosemite Valley from August 16 to 20, 1926.

Mortality statistics of the hospital patients was discussed by the Saint Francis Hospital Clinical Society at the June meeting.

The obligation to explain the death of a patient to one's colleagues is calculated to promote the careful study, diagnosis and treatment that all patients are entitled to.

The Medical Library Association held its twenty-ninth annual meeting at Ann Arbor recently. Sixty medical libraries from all parts of the United States sent delegates; Mary E. Irish, Barlow Medical Library, Los Angeles, represented California at the meeting.

Officers of the association for the ensuing year are: John H. Ruhrah, Baltimore, president; Harvey Cushing, Boston, vice-president; Miss Biethan, University of Michigan, Ann Arbor, secretary; and Miss Loomis, Northwestern University, Chicago, treasurer.

Mrs. Irish has supplied us with a report of the meeting, which should have a great interest for members of the medical profession because the keynote was not what is of the greatest advantage to the librarian, but how can the librarian best serve the medical profession in obtaining and making available the greatest and best material for practical and scientific use or research?

The American Hospital Association announces the removal of its offices from 22 East Ontario Street to 18-20 East Division Street, Chicago.

The 1926 meeting will be held at Atlantic City, September 27 to October 1. William H. Walsh is executive secretary.

The Pacific Northwest Medical Association recently held a most successful meeting at Spokane. These meetings are attracting much attention because of the splendid way they are organized down to the last detail and because prominent invited physicians, many of them experienced teachers of medicine, take leading places on their programs.

Invited speakers at the recent meeting included Hans Lissner, San Francisco, who spoke and gave a clinic on Endocrine subjects; Howard Naffziger, San Francisco, addresses and clinics on Surgical Neurology subjects; Karl F. Meyer, San Francisco, who discussed local immunity and Tetanus; George Dock, Pasadena, who spoke on Neuropathies, Anemias, and conducted a medical clinic. Dock also spoke on "Modern Trends in Medicine" at a banquet, of which it is said—well, it won't be forgotten.

**Exophthalmic Goiter in Childhood**—Thirty cases of exophthalmic goiter occurring in children less than 15 years old are reviewed by Henry F. Helmholz, Rochester, Minn. (Journal A. M. A.). Compound solution of iodine, administered in doses of from 5 to 10 minims (0.3 to 0.6 cc.) three times a day, reduced the basal metabolic rates and toxic symptoms very markedly. It made preliminary operations unnecessary in the last eleven cases. Of twenty-four patients operated on, two died, one in crisis twenty-four hours after operation and the other from bronchopneumonia one week after operation. The duration of the symptoms, which varied from six months to eight years, indicates that frequently this disease is not recognized early or its seriousness is not appreciated. The patients came largely from Minnesota, Iowa, Illinois and Wisconsin, in the order named. Tachycardia was noted in 100 per cent of the cases. The thyroid gland was definitely enlarged in all but two cases. All but two patients complained of nervousness. Emotional instability was perhaps the most marked feature. Exophthalmos was definite in twenty-five of the thirty cases, and in one of the remaining five there was the characteristic stare.

## READERS' FORUM

*Dear Editor*—Another kick—no, not at us, but at the Government, or its administrators.

*Why*, in the name of all that is holy, should it be necessary for a reputable physician to send a "certified check" in payment of the measly \$1 Narcotic Tax fee? In this day and generation, when a man's check is ordinarily worth 100 cents on the dollar in any part of our country, it looks as if the Collector of Internal Revenue was putting something over on us. If it is not merely a local rule, the matter should be taken up with the Department in Washington, D. C., and satisfactorily adjusted. It is merely another instance of jamming us. Now everybody holler!

Yours groaningly,

(Signed) WILLIAM A. ROWELL.

P. S.—What could they do if one enclosed a \$1 bill—legal tender all over these United States?

San Francisco, June 30, 1926.

*Dear Editor*—writes a prominent non-medical man—"Today I listened to a radio talk by Mrs. A. Yuille (KFWM) on the responsibility of doctors for drug addiction, and it should be called to your attention.

"She quoted from Doctor Blair in the 'Survey' and charged the profession with 'majority of 75 per cent of the addiction which exists at present.' The whole talk was a defamation of the honor and integrity of the profession, and her statements were not in accordance with the facts and absolutely untrue."

This is a fair sample of many complaints about the misleading and even false propaganda that seems to constitute an increasing amount of the stuff of which some radio programs are made.

Los Angeles, California, July 14, 1926.

*Dear Editor*—The low esteem in which a noble and honorable profession is held by certain classes in the community is due to a variety of causes. In my humble opinion, the most potent of these is the habit of uttering in semi-private or semi-public occasions derogatory remarks concerning our fellow practitioners.

Another potent cause of this deplorable condition is the failure on the part of many doctors to uphold and defend the noble profession to which they have the high honor of belonging, against insidious and dastardly attacks.

To our shame, it is sad to relate, occasionally these attacks emanate, not from our avowed enemies, but from thoughtless members of our own profession.

A glaring instance of this occurred recently under my own personal observation. The circumstances were as follows: A doctor standing ahead of me in the line of applicants for renewal of the Harrison Narcotic License, in the office of the Collector of Internal Revenue, after filling out the inventory said in a loud voice, "Why, I use very few narcotics in my practice, but my competitors buy them by the thousand."

Can you imagine anything more disloyal and more despicable?

Another instance occurred a few months ago, at a regular meeting of a County Medical Society assembled to hear talks from the prohibition director and his associates.

In the course of the discussion which followed, in answer to an adroit question propounded by the prohibition director, a doctor calmly confessed, to the utter astonishment of all present, that about 99 per cent of all his whisky prescriptions were fraudulent. Anyone familiar with the psychology of the average doctor knew that this answer was given in a jocular spirit of bravado. It was to be taken with several grains of salt.

At a large meeting of a woman's club held a few days later, the prohibition director cited this to show

how little respect the average doctor has for the Eighteenth Amendment.

Despite the fact that for nobility of character and pure unselfishness the medical profession stands unrivaled, we must remember that we are in the land of the Philistines.

Yours truly,  
JOHN C. COPELAND, M. D.

### M. O. R. C.

California still lacks about 42 per cent, or 519, of its Medical Reserve Officer quota. Utah, which has responded 122 per cent, is now engaged in enrolling more officers to help make up the deficiencies of some of its sister states.

During June the changes in our territory were as follows:

	New Medical Officers Commissioned	New Applications Received
California .....	19	22
Utah .....	2	1
Nevada .....	0	0

The status of the entire Ninth Corps area is shown in this table:

	No. of physicians registered .....	No. of Medical Re- serve Officers each state should furnish	No. of Medical Of- ficers enrolled	Percentage enrolled of total required.....
California .....	7,549	1,243	724	58.24
Washington .....	1,756	289	187	64.70
Oregon .....	1,158	191	164	85.81
Montana .....	568	94	99	105.31
Utah .....	497	82	100	121.94
Idaho .....	452	75	45	60.00
Wyoming .....	263	43	36	83.72
Nevada .....	140	23	10	43.3
Alaska .....	60	10	2	20.0
Total .....	12,443	2,050	1,367	66.68

### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, name and address of executive officer of coming meetings for insertion in this directory.

American Medical Association, Washington, D. C., May 16-20, 1927. Olin West, Chicago, Secretary and General Manager.

California Medical Association, Los Angeles, April 25-28, 1927. Emma W. Pope, Balboa Building, Secretary.

Nevada Medical Association, Reno, Nevada, September 24-25. Horace J. Brown, Reno, Secretary.

Utah Medical Association, Salt Lake City, ———. Frank B. Steele, Salt Lake City, Secretary.

Pacific Coast Surgical Association, Del Monte, February, 1927. Edgar L. Gilcreest, San Francisco, Secretary.

Pacific Northwest Medical Association, ———. Frederick Epplen, Spokane, Secretary.

Pacific Coast Oto-Ophthalmological Society, San Francisco, ———. Kaspar Pischel, San Francisco, President.

Northern California Medical Association, Woodland, ———. John D. Lawson, Woodland, Secretary.

California Association of Physiotherapists, Los Angeles, April 25-28, 1927. Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary.

Southern California Medical Association, Los Angeles, ———. C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary.

California Association of Medical Social Workers, Los Angeles, April 25-28, 1927. Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary.

Medical Women's National Association, Chicago, ———. Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary.

California State Nurses' Association, ———. Mrs. J. T. Taylor, 74 New Montgomery Street, San Francisco, Secretary.

American Association for the Advancement of Science, Pacific Division, ———. W. W. Sargent, Secretary.

American College of Surgeons, Clinical Congress, Montreal, October 25-29, 1926. Franklin H. Martin, Chicago, Director-General.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM

Another instance of fraud in the making of doctors was recently uncovered by the Board of Medical Examiners following a thorough investigation of the credentials of Ralph M. Putnam, who, according to his application to the California Board, pursued his freshman, sophomore, and junior years of medical study at the University of Vermont, then going to the University of Southern California. There, according to his statement, he presented a fraudulent transcript showing completion of the first three years of medical study at the University of Vermont.

When called before Dr. Charles B. Pinkham, secretary of the California Board, for an explanation of the discrepancies in his professional record, Putnam confessed that through a friend who had access to the office records of the University of Vermont, he obtained a blank record transcript with the seal of the college attached, and that Putnam thereon wrote in his own statement of credits for three years' medical study. This statement, apparently bona fide, was accepted by the University of Southern California. After Putnam had completed his senior year in that institution he was granted a diploma conferring upon him the degree of doctor of medicine, dated June 17, 1920.

The records of the Board of Medical Examiners of Massachusetts showed that Putnam failed in the written examination in that state in November, 1920, March, May and July, 1921, and March and July, 1922. He is also reported as having failed the Connecticut examination, July, 1923, neither of these states having discovered the irregularities in Doctor Putnam's credentials.

The Putnam case is similar to that of Charles Barnard, who claimed on his application to the California Board that he was a graduate of the Atlanta Medical College, and explained his failure to produce a diploma of said institution by stating that he had placed his medical diploma on a mail box, said diploma being addressed to the Board of Medical Examiners, and had thereafter lost all track of said diploma. When confronted with the report by Secretary Pinkham that Atlanta Medical College disclaimed his graduating, Barnard acknowledged that he had not graduated from said medical college and that his story in connection with his diploma was untrue. Some time later it was learned that Barnard claimed a diploma issued by the Oriental University of Washington, D. C., whose president and owner, Bishop Hollar, was recently reported as having been given a prison sentence in connection with the Federal investigation of the recent activities of the diploma mills.

The value of the annual registration feature of the Medical Practice Act recently has again been demonstrated when an individual named David Franklin requested the Board of Medical Examiners to issue him a duplicate certificate, claiming that he had lost the original and that his medical credentials had been burned in the San Francisco fire of 1906.

In line with our usual policy, we requested this individual to submit an affidavit covering salient facts. We learned through this affidavit submitted by Franklin that he claimed (1) graduation from the Medical Department, University of the City of New York, 1878; (2) to have been licensed in California the year following; (3) that he had practiced in California almost continuously since 1879.

A thorough investigation developed the interesting story that Franklin's real name is Oscar (not David); that he was alleged to have been prosecuted for violation of the Medical Practice Act in Geneva, Nevada, some years ago, he leaving there rather suddenly; that for many years he had been practicing in California under the credentials of the bona fide David Franklin (1) who did graduate from the University of the City of New York in 1878; (2) thereafter became prominently identified with medical matters in New York City, affiliated with various medical organizations and hospitals, and (3) died in New York City in 1903, following an operation for appendicitis.

Prior to the passing of the annual registration law it was not possible to check up on cases of this kind, it

being particularly true in this instance, David Franklin having pursued a migratory practice in California for many years without molestation.

The medical profession has its share of impostors, making necessary constant vigilance.

Legitimate medical credentials are hard earned, and hence, the impostor is urgently anxious to acquire any documents which may give him semblance of a standing.

Diplomas, as well as state certificates, are frequently stolen from legitimate practitioners, with the idea that the thief may use these documents in obtaining a license to practice medicine and surgery. Dead men's credentials are also acquired with the same thought in mind.

Diplomas, licenses, etc., are manufactured by individuals who live in hopes that some value may be attached thereto or some right of practice earned thereunder.

An interesting case was uncovered recently by the Board of Medical Examiners. An applicant, admitted to the March, 1926, examination, pending the filing of fully completed satisfactory credentials, later admitted to the secretary of the board that a friend of his at the University of Vermont had stolen an official record transcript from the registrar's office; that said applicant had filled in a full statement of three years of alleged medical education at the University of Vermont; that this fraudulent document had been accepted by the College of Physicians and Surgeons, Medical Department of the University of Southern California, for senior standing, and that said institution had issued a medical degree following a one-year course of study. The applicant in question was emphatically informed that so far as the state of California was concerned, there was no room for him until such time as he completed a full course of medical instruction required under the law.

The annual registration is the one and positive means whereby an accurate check can be maintained to determine those legally entitled to practice under the laws of this or any other state.

According to newspaper reports, a recent ordinance passed by the Los Angeles County Board of Supervisors, requiring "vaccination of all dogs against rabies," has stirred up a protest on the part of the Orange County Chiropractic Association.

W. A. (Alfred) Bach is reported to have been recently arrested on a charge of violation of the State Medical Practice Act, and the preliminary hearing set for July 19, 1926, in the Justice Court of Riverside Township. The files of the Board of Medical Examiners show that Alfred Bach has on prior occasions been similarly charged. One of his specialties seems to be the opening of sanitariums and subsequent "high finance" in connection therewith.

The case charging C. D. Crutcher, M. D., with violation of the chiropractic law was recently dismissed on instructions of Justice Pawley. The investigator for the Board of Chiropractic Examiners declared that the practice of chiropractic on a medical license was illegal. Attorney-General Webb rendered an opinion to District Attorney Ford of Riverside County, wherein it is held that a certificate to practice as a physician and surgeon is unlimited and includes the right to practice chiropractic, etc.

A physician's alibi did not prove so good in the eyes of Judge Ezra Neff of the South Gate City Court last night when the trial of Dr. K. C. Dennis, charged with transportation and possession of intoxicating liquor, was concluded. The doctor was found guilty and fined \$250 on each of the two counts. . . . (Huntington Park Signal, June 17, 1926.) There is no record of an individual named K. C. Dennis licensed to practice as a physician and surgeon in the state of California.

Mrs. Abigail Ripley Smith was recently accidentally electrocuted while taking an electrical treatment for rheumatism, the report relating that she was alone in the office and unfamiliar with the operation of the high frequency machine which caused the accident.

R. Thompson Fowler, who has frequently been investigated for violation of the Medical Practice Act, as mentioned in "News Items" for May and June, 1926, was recently freed on a charge of violation of the Medical

Act, following his trial for treatment of Edward A. Raddatz, disabled war veteran. "According to the testimony of Raddatz, Fowler came to his home at 75 Dutton Avenue, San Leandro, in the latter part of 1925, carrying a stethoscope, examined him, and told him that he would give treatment at the rate of \$60 per month. Fowler, he testified, left thirty small vials with him, which he was to take at prescribed intervals. Later he testified Fowler prepared for him a steaming teapot, from whose funnel he was to inhale steam in an effort to cure, and the ailing man carried out instructions. The vials and steam breathing, however, were not the only means of seeking a cure, but there were also intravenous injections from time to time."—Oakland Times, June 17, 1926.

Even though he occupied a prison cell, life seemed good again today to Dr. Edward Gray, once a prominent x-ray specialist of Chicago, who during the last eight years has been an exile in loneliness—a fugitive from justice. Gray surrendered to Honolulu authorities last week, determining to face charges alleging he contributed to the delinquency of Leona Josephine Green, a Wallace, Idaho, girl, in California eight years ago. He fled from San Francisco shortly after his arrest at that time, forfeiting the \$5000 bond and was never heard of until he walked into the Honolulu sheriff's office here.—San Francisco Call, June 14, 1926.

The charges of murder preferred against Dr. J. G. Ham, his assistant Herbert E. Del Val, and Edward Seiffert were dismissed in Superior Judge Keetch's Court today.—Los Angeles Herald, June 29, 1926.

The State Board of Chiropractic Examiners yesterday filed suit in the Superior Court for an injunction to restrain Dr. L. D. Harding, 1067 Market Street, a licensed chiropractor, from practicing electrotherapy and certain other systems of healing, on the grounds that his license as a chiropractor limits him to certain methods. . . . The suit is brought as a test case in the interest of chiropractors who seek a ruling by the court that will definitely determine the privileges and limitations of a chiropractic license.—San Francisco Chronicle, June 24, 1926.

Harley H. Heddens, mentioned in "News Items" of December, 1925, and March and May, 1926, is reported to have plead guilty to a charge of violation of the Medical Practice Act, June 26, 1926, in the Superior Court at Bakersfield and sentenced to a fine of \$200 and to serve six months in the county jail of Kern County, said fine having been paid and jail sentence suspended for a period of six months.

Walter J. Heinrichs (or Hendricks), mentioned in "News Items" of June and July, was recently reported as held in \$2000 bond in Los Angeles on a charge of violation of the State Poison Act.

The Kansas City College of Medicine and Surgery today was ordered ousted from the state (of Missouri) and its state corporation charter was revoked by the Supreme Court. . . . (Kansas City [Missouri] Star, July 23, 1926.) It will be recalled that this Kansas City institution, as well as the St. Louis College of Physicians and Surgeons, was charged with the operation of "diploma mills" or the sale of medical diplomas.

Dr. Franklin E. Kerr, Garden Grove physician, sent to Leavenworth last Tuesday for five years for attempting to murder his divorced wife, Luella F. Kerr, by sending her poisoned candy through the mails, is "broke." Doctor Kerr yesterday filed a voluntary bankruptcy petition in the Federal Court, listing his liabilities as \$5545.25 and assets at \$475. Included in the liabilities was a \$3500 promissory note made out to Attorneys John S. Cooper and Louis D. Collings, of Cooper, Collings and Shreve.—Los Angeles Examiner, June 26, 1926.

County jail officers today prepared to take Dr. William H. Lochman to the poor farm following the sentencing of the aged physician by Judge Arthur Keetch on a charge of performing an illegal operation. The doctor plead guilty yesterday. Declaring him a menace to society, Judge Keetch sentenced the physician to a term of from two to five years in San Quentin, but suspended this verdict, ordering that Lochman remain at the poor farm for two years.—Los Angeles Herald, June 29, 1926.

Charged with fraud and deception in obtaining California credentials in his profession, Dr. Charles H. Wood, head of the Los Angeles College of Chiropractic and



former president of the California State Chiropractic Society, Southern Division, was today cited by the State Board of Chiropractic Examiners to appear at a meeting in San Francisco on July 12 to show cause why his license should not be revoked.—San Francisco Examiner, June 15, 1926.

Dr. Demayhew L. McDonald was recently reported charged by the Glendale police with cashing twenty-five "rubber checks." They totaled \$325. As he cashed the last one he was arrested. The records of the Board of Medical Examiners do not show anyone by this name licensed to practice in this state.

According to a recent report of Special Agent Carter, Howard Lee Moffatt, M. D., charged with prescribing narcotics not in good faith and with being an addict, was sentenced on the fourteenth day of June, 1926, in Department 5 of the Municipal Court of the City of Los Angeles, to serve six months in the county jail, said sentence being suspended by the court for a period of two years on condition that defendant take treatment for addiction.

Dr. Fred A. Oaks, chiropractor of 225 Taylor Street, San Francisco, today was cited by the State Board of Chiropractic Examiners to show cause why his license should not be revoked for performing an illegal operation.—San Francisco Call, June 30, 1926.

Dr. A. E. Pike, former mayor of the City of Signal Hill and owner of an osteopathic sanitarium, was yesterday reinstated to the practice of osteopathy by the State Board of Osteopathic Examiners. . . . About two years ago the board passed a resolution revoking Doctor Pike's license on the ground that he improperly used the letters "M. D." after his name as it appeared on his reception door. . . . —Long Beach Sun, June 17, 1926.

Dr. John H. Seiffert, found guilty by a jury of second degree murder for the death of Mrs. Louise Giovanazzi, following an illegal operation, was sentenced to San Quentin Prison today by Judge Lacy D. Jennings for a term of from ten years to life. . . . Notice of appeal and stay of execution was granted.—San Diego Sun, June 9, 1926.

According to reports, W. P. Seipert, mentioned in "News Items" of June, 1926, has been arrested by the Chiropractic Board for practicing without a license and the case set for trial July 7, 1926.

Carl J. Weberg, D. C., president of the Pasadena Chiropractic College, mentioned in July "News Items," is again in difficulty with the Pasadena Health Department, which has questioned Doctor Weberg's legal status in handling maternity cases, in view of the fact that his petition to establish a maternity hospital in Pasadena was refused last year. This recent difficulty arose following the death of the infant daughter of Mrs. H. B. Wright, which occurred after she had been revived twice by the Fire Department Inhalator Squad. Doctor Weberg was a hoseman in the Pasadena Fire Department until September, 1920, when he was suspended by Chief Coop for insubordination.—Los Angeles Times, June 22, 1926.

Dr. Robert B. Williams, a local physician, was indicted by the United States Grand Jury yesterday on a charge of sending poison through the mail. It is alleged that Doctor Williams sent sixty grains of morphine to Mrs. Hattie Page, Route C, Box 5, Hanford. A bench warrant was issued for the arrest of Doctor Williams and bail was fixed by Judge A. F. St. Sure at \$5000.—San Francisco Examiner, June 29, 1926.

A. M. Waters, self-styled physician, was released from the county jail on \$2500 bond late yesterday through the efforts of his attorney, George Stoddard. Following Waters' preliminary hearing in Judge Thomas L. Ambrose's Court, the defendant was held to answer on a charge of grand larceny by trick and device and obtaining money by false pretenses and extortion.—Los Angeles Examiner, June 13, 1926. The records of the Board of Medical Examiners do not show anyone by the name of A. M. Waters licensed to practice in this state. Our violator file shows that an individual named Archibald M. Waters had his Michigan certificate revoked in 1907.

"After serving 117 days in the county jail on a sentence of one year imposed for misuse of the mails, Dr.

S. M. Wells was freed on probation yesterday by Judge McCormick. He was convicted in connection with the promotion of the Co-operative Oil Syndicate of Santa Fe Springs."—Los Angeles Examiner, June 16, 1926. According to report, S. M. Wells, James P. Fer Don and William Vurbillat were convicted of misuse of the mails and fraud in the promotion of an oil syndicate in April, 1925. Fer Don and Vurbillat were sentenced to two years in Leavenworth, and we understand were paroled after serving one-third of their sentences. Seth M. Wells was denied a license to practice in the state of California after an investigation of his antecedents.

At a meeting of the Board of Medical Examiners, held in San Francisco, July 13 to 15, inclusive, the following action was taken in the specific cases as enumerated:

Bromley, R. Innis, M. D.—Five years' probation, the terms requiring that he give up his narcotic permit and not receive or apply for one within the period of one year after July 15, 1926.

Brown, James T., M. D.—Five years' probation, commencing July 13, 1926, the terms requiring him to give up his narcotic and alcohol permits during the period of probation.

Elliott, Charles R., M. D.—Certificate revoked July 14, 1926.

Kerr, Franklin E., D. O., M. D.—Certificate revoked July 15, 1926.

McAdory, Robert J., M. D.—Certificate revoked July 15, 1926.

McKibbin, Rupert E., M. D.—Certificate revoked July 15, 1926.

Nelson, Arthur B., M. D.—Certificate revoked July 13, 1926.

O'Hara, T. Jerome, Naturopath—Certificate revoked July 13, 1926.

Owen, Jacob L., M. D.—Five years' probation, commencing July 13, 1926, the terms being that he shall not apply for or receive a narcotic or alcohol permit during the term of probation.

Rinker, Casper L., M. D.—Five years' probation, commencing July 14, 1926, the terms requiring that he shall not apply for or receive a narcotic permit during the period of probation.

Smith, Clarke S., M. D.—Certificate suspended for five years, commencing July 14, 1926.

Wakefield, Orin R., M. D.—Certificate revoked July 15, 1926.

When we say typhoid fever is caused by the typhoid bacillus, we leave out the "ifs"; we simply make the broad statement of cause and effect, and prove it. This is a good time to speak of typhoid, for it occurs as an annual crop from July to October, attacking the individual just at the period of his greatest economic value to the community, and entailing a yearly financial loss of nearly \$100,000,000 to our country; a disease absolutely preventable, a disgrace to a community because it is a disease showing defective civilization, and one in which the community paying the least attention to modern sanitation suffers most, as it should, for the individual cannot wholly protect himself without the aid of the community.—Ohio Health News.

Health can be taught; it can be so directed, if health education becomes a requirement in all schools, that the veil of ignorance surrounding so many persons and homes will be lifted. Mothers and fathers of the future will thus be educated in the value of the proper management of their children. For health training in the home is even more essential than that which the school can give.—Hygeia.

The Division of Social Hygiene reports a steady increase in the number of children receiving clinic treatment for congenital syphilis, the average monthly attendance so far this year being 426 as against an average of 251 in 1924.—Health News, New York.

